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SMALL HOSPITALS FOR SMALL PLACES

The Oration on Medicine, Delivered at the Forty-first Annual Meeting

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Cadillac

As will be noted, I have departed somewhat in the selection of my subject from any direct relation to the annual oration on medicine. I might have utilized the privilege of the preacher, by accepting the text and referring to it again only in the benediction, or taken to myself the liberty of the after-dinner orator who usually uses his topic as the basis of his opening joke and returns to it no more, had I sought to share in this connection with either the inspiration of the preacher or the glowing fervor of the orator. But the privilgee I have taken is based upon a long-possessed and increasing interest in a subject which it seems to me is appealing to all the members of our profession for sympathy and favor beyond that which it has to this time received.

I am not unmindful of the wisdom and value of repeated reviews of the subject of medicine on these occasions, nor of the interest there may be in gathering from the opinions and practice of another some suggestions applicable to the day by day problems of our life work. But our medical literature is rich with offerings on that subject; observation, experience, laboratory results, theories, and the carefully prepared reviews of our recognized specialties, all contributing to a fund and flow of presentation relating to medicine already beyond the ability of the average physician to read and digest. I am therefore quite sure that little or nothing will be lost in my departure from the program, however lacking my offering in another direction shall be from the purpose I have had in mind.

In asking your attention for a time to the subject of the small hospital for cities and communities where no other than the small hospital could be possible or desirable, I realize that I am entering upon a discussion to which most of you have given attention and thought, many, perhaps, to degrees beyond that which has been possible in my own case.

I am sure that the experience of those of you whose practice has been at all related in kind and character to my own has suggested in advance all the arguments that I can here present in behalf of the small hospital for small places. I have always shared the sentiment expressed by the declaration, that the school-house should follow the flag, and through recent years I have coined for myself another declartion, which I think includes practical value as well as patriotism, that following the flag and the school-house as closely as possible should come the hospital.

Permit me here to express, if I can, some of the thoughts which have passed through my mind concerning this need, as an aid to the physician, as a boon to the community, and as a forceful factor in educating public sentiment in some very necessary directions. It is true, I know, in the experience of all my brother physicians, that lack of intelligent use of the right rules of living is the foe to health one most often meets. A little while ago it was not thought necessary to regard as worthy of attention, any of the requirements which today stand first in our estimation. The incantation of the medicine man, superstitious ceremonies, blind acceptance of the so-called decrees of fate, made use of by the cunning and the better informed, were so long utilized that to this day, in one form and another, they play an important part in connection with the problems of our work.

We meet men and women every day who seem to think that the horns and cloven hoofs of his Satanic Majesty are somewhere hidden in the dark rooms of every doctor's office. And today organizations exist, some of them claiming relationship to science as well as to religion, which actually teach their adherents to disregard the laws of life and of living, of disease and of death, with the expectation that denial and disregard will relieve them from the penalties imposed by the Creator of the race and the Originator of life.

I want the modern hospital to be to every community the school room in which the principles of our profession can be portrayed. With all the limitations that would necessarily exist in connection with an institution such as I have in mind, I am yet sure that its educational value to the community, as well as to the members of our profession who would share its privileges, would not be the least of its contributions. That the worthy members of our profession do hold, and have always held, that sunshine within, as well as without, is an aid to health, that courage and hope and faith have their place in our work, that we do not have to return to the dark ages in order to make the best possible use of the relation of the mind to the functions of the body, are illustrated in the day-by-day experience of every good hospital. These facts are also illustrated in our own ordinary practice, but we cannot control the environment of the private sick room, nor have its influence teach something of value to an entire city, as can be done through the hospital.

I am sure it is the experience of my brother practitioners that the patient who knows something of hospital practice, who through the experience of himself or an immediate member of his family, has gained information concerning hospital requirements and hospital care, and its freedom from the individ-

ual idiosyncrasies which serve to hinder and embarass their best work, find in such patients elements of assistance that cannot come from those who know nothing of hospital methods and hospital requirements. My plea for the hospital to accompany the school-house wherever possible, therefore, is based on the service it can render, and will be echoed, I am sure, by those who recognize the need of that service, even though we may not have yet reached the point where such general provision can be made.

I fully agree with Ochsner's statement, that modern medical and surgical achievement has made hospital care a necessity. If we can bring this necessity to the recognition of others as plainly as it appears to us, better results than we have heretofore hoped for will follow, and those who in future years do the work which we are now seeking to do will make more rapid progress in the direction for which we are now urging sympathy and action.

It is authoritatively reported that there are about seventy-five hospitals now in successful operation in Michigan; forty being of a private character and having a total capacity of one thousand beds, and thirty-five public hospitals with a capacity of about twenty-five hundred hospital beds, or less than one for each one thousand inhabitants of this great state of which in so many respects we have reason to be proud.

Those who have given this subject some of the attention it deserves declare that there should exist an average of at least one hospital bed for every one hundred inhabitants. Perhaps those who so believe and so insist are optimistic prophets and over-enthusiasts, but I am sure the Michigan members of our profession will agree that it is optimism and enthusiasm in a very desirable direction.

The cost of the hospitals already established in Michigan, I am told, varies from one hundred dollars per bed in some of the smaller buildings, to five thousand dollars per bed in a few of our larger and more recent structures, one thousand dollars per bed being considered a reasonable cost for an average up-to-date, fire-proof hospital building. I am further informed that sixty per cent of all our buildings are wooden and were constructed primarily for residences or other purposes, and with a few alterations were converted into hospitals. These buildings, while not altogether satisfactory and lacking much in the way of proper ventilation, hygienic plumbing and conveniences, nevertheless demonstrate the fact that they are very much needed and should be made use of until such time as better buildings can be obtained. Forty per cent of the buildings were constructed primarily for hospital purposes and are built of brick and stone, or brick and wood, many of them fire-proof, and having all the conveniences that modern architecture can provide and constructed with a proper appreciation of our present idea of sanitary law. The mangement of the larger institutions is entrusted to a superintendent and a board of directors, or to one of the sisterhoods, and the smaller institutions to a matron, a trained nurse or a local physician.

The management of the country hospital is the most serious problem in connection with these institutions. Until such time as we can offer a better system, I should advise the management of one of the sisterhoods. They have de-

veloped, through a long-time experience, a system that seems to insure the success of their institutions. This statement does not necessarily apply to private hospitals owned and managed by physicians.

Our small hospitals, outside of the large cities, are doing a needed work and doing it well; in many cases better than it could be done in the more imposing hospitals of the cities. They afford a means of saving life and limb in numerous emergency cases that would be lost before a patient could reach a hospital in a distant city, so that even if the facilities for caring for patients were notably inferior to those of the large hospitals, their greater convenience of location should turn the balance in their favor. In many of the smaller hospitals, however, the facilities are quite equal to those of the larger hospitals, and though they cannot take care of as many patients at a time they can care for those they do receive with all the refinement of modern medical and surgical art.

Though the primary object of a hospital is the care and cure of the sick and injured, as I have suggested, it performs another important function in the training and better education, not only of the medical and surgical staff, but also of every doctor in the community. The hospital encourages more careful methods, greater cleanliness, better hygienic conditions, introducing laboratory methods, and compelling the older physicians, as well as the younger members of the profession, to adopt better ways and greater exactness, not only in the hospital, but also in their private practice. All this raises the standard of the local profession, both intellectually and professionally, and for this reason, if for no other, I would urge again that our small cities cannot afford to be without a hospital.

Home pride, as well as home love, the value of real estate and stock of goods, all the interests which serve to bind the members of a community to each other and to make for permanency the moral and material values they seek to mutually uphold, will be assisted through the establishment of a hospital, as a permanent part of such possessions and as a valuable addition to such interests. It may be true that insistence in the direction of this plea will cause the charge to be made that we are in advance of public opinion, that the need of a hospital in every community is not yet recognized and that labor in its behalf will be slow and discouraging; this may be true, but I am glad to know that I am appealing to a profession that has never lagged in the rear when a real duty appears at the front. The very word "hospital" was coined out of generous and chivalrous inclinations to care for those who needed to be cared for, to provide for those who might else suffer and die.

I believe that hobbies are helpful if they are sensibly directed. I know that enthusiams are productive of enjoyment and tend to higher living and better living, if they have a worthy purpose. I wish I could make interest and favor for the establishment of hospitals in Michigan the hobby and the enthusiasm of every doctor in our state. That answer given by the little daughter of a physician in reply to a question as to where her papa was: "I do not know where he is just now, but I do know that wherever he is, he is helping somebody," can be made to apply to all who

in this work will take some part.

I do not wish to urge favor for the larger establishment of hospitals as the only interest the physician should possess or as the only subject of public importance he will need to give attention to. A vein of humor, which I happily possess, prevents me, I think, from encroaching upon the serious precincts of the crank, but humor also aids us all in interpreting the real needs of our kind. The highest human incentives, love for those around us, hope for the days and years to come, patience with conditions we can make better but cannot remove, will lead us to see our duty in the direction I have named, and my prayer is that they may successfully urge us to do our best to perform it.

CYTODIAGNOSIS OF ORGANIC PSYCHOSES*

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Within the last few years observers have called attention to the fact that in certain diseased conditions of the central nervous system, accompanied by irritation of the meninges, changes are produced in the cerebro-spinal fluid. These changes have been studied not only from a chemical, from a bacteriological and from a physical, but also from a cytodiagnostic or histological point of view, i. e., the study of the cellular elements contained in the cerebro-spinal fluid.

For purposes of diagnosis the chemical examination of the cerebro-spinal fluid is of litle value.[1] An increase in albumin occurs under some conditions, but is accompanied by other changes more valuable for diagnostic purposes. The bacteriological findings, when positive, are of great importance in diagnosing menigitis, for by a careful examination the specific cause of the inflammation can be isolated and identified.

The application of cytodiagnosis to the cerebro-spinal fluid, first introduced by Widal, Sicard and Ravaud[2], in 1900, has proved to be a procedure of much value. Normally the fluid contains a very few leukocytes—one or two to the cubic millimeter, usually of the small lymphocyte variety.[3-5] When the meninges are the seat of irritation or inflammation the cellular elements of the fluid are increased, and from the number and character of these cells inferences may be drawn regarding the nature and intensity of the pathological process. This change seems in some ways analogous to the changes in the blood cells observed in infectious conditions. For example, an infection by one of the pyogenic bacteria produces an increase in the polymorphonuclear leukocytes of the blood. When this infection involves the meninges there follows an increased

*Read May 1, 1906, at a meeting of the staff of the Eastern Michigan Asylum.

number of these cells in the spinal fluid.[4] In conditions accompanied by a chronic irritation of the meninges—not a septic infection—the cellular increase is confined to the lymphocytes. This change has been frequently observed and is of considerable diagnostic value in tuberculous meningitis.

Cytodiagnosis of the cerebro-spinal fluid in cases of insanity, both with and without a demonstrable organic basis, has been investigated by a number of observers within the past four or five years. Their reports show some variation, as is to be expected from a lack of uniformity of technic and from a limited number of investigations made. In the main, however, they agree that an increase of the lymphocytes of the cerebro-spinal fluid is indicative of meningeal irritation.[6] Thus in such conditions as paresis, tabes dorsalis, and syphilis of the brain, diseases in which there is present, in a varying degree of intensity, meningeal irritation, we usually find a decided increase in the lymphocytes of the fluid. The results of 120 punctures made by Joffroy and Mercier,[7] in 1902, were so constant that they considered themselves able to diagnose paresis or tabes dorsalis on the presence of a lymphocytosis, and to exclude it when the count showed no increase. Kramer[5] made a study of 29 patients by this method, with the following results: Cases of dementia praecox, Huntingdon's chorea, epileptic insanity, melancholia, chronic alcoholism, and pseudo-diabetic tabes showed no increase in the number of lymphocytes, while nine of the cases of paresis investigated gave an average of 27 cells to the cubic millimeter. In the other two the count was 129 and 145 respectively.

Bernstein[4] reports finding very few cells, or none, in six cases of brain tumor. A few were found in each of three cases of chronic pacchymeningitis. Dana,[3] while not making an accurate enumeration of the cells, found their number decidedly increased in nine out of eleven cases of paresis. Two cases of brain tumor showed no lymphocytosis, and the same condition was present in congenital hydrocephalus, alcoholic insanity, and Karsakoff's psychosis. Fraenkel[8] reports an increased number of cells in tabes, paresis, and multiple sclerosis. Other writers report findings similar to those already quoted.

From these data it is seen that we may expect to find a lymphocyte increase in cases of paresis, tabes, and syphilis of the central nervous system, and a normal number in manic-depressive insanity, melancholia, dementia praecox, and other psychoses, unaccompanied by meningeal irritation. Lymphocytosis indicates only meningeal irritation.

As a general proposition it is probably true that the more intense the irritation the greater is the lymphocytosis. This would be analogous to the behavior of leukocytosis of the blood cells in a septic infection. This is the conclusion Fischer[9] reaches after finding in two cases, proved to be paresis by autopsy, a marked lymphocytosis in one and almost an absence of lymphocytes in the other. He reasons that the only inference which can be drawn from cytological findings is as to how markedly and how extensively the meninges are infiltrated, and to some extent whether the process is slow or rapid.

Assuming this to be true, we can explain certain findings in cases of paresis,

which at first sight seem contradictory. Cases 14 and 16 of our list, both diagnosed clinically as paresis, give respectively 41 and 58 cells per cubic mm.; while cases 17 and 19, also cases of paresis, show only an average of 0.75 and one and one-half cells. Case 16, however, is of only two and one-half years' duration, and the disease is at present rapidly advancing. Case 14 is of only eleven months' duration, but has reached a stage in which both physical and mental symptoms are marked. On the other hand, cases 17 and 19 are both old cases, having been in the asylum ten and twelve years respectively, and at present are in a quiescent state. We might expect from clinical data that meningeal irritation would be less active in them than in the other two cases, and the lymphocyte count substantiates this opinion. Other examples of the coincidence of a low lymphocyte count, with subsidence of the pathological changes, and a high count with active changes, will appear later in this paper.

With regard to the time at which a lymphocyte increase occurs, it is claimed[7] that it often precedes the disturbance of speech and pupillary phenomena.

In performing the lumbar punctures tabulated in this paper, the following technic has been followed: The patient is placed in a sitting position, inclining slightly forward. His back, in the lumbar region, is thoroughly cleaned, and a spot about three-fourths of an inch below the level of the crests of the iliac bones and the same distance to one side of the median line, is made anaesthetic by infiltrating the skin with cocaine. Under strictly aseptic conditions, the hollow needle is forced through the skin at this point, and, giving it a slightly upward and inward direction, the intervertebral foramen sought. Usually this can be located without any difficulty. The needle frequently strikes the lamina on the first thrust, but its further entrance announces its penetration of the spinal canal and the subarachnoid space. The trocar is then withdrawn from the needle and the fluid allowed to run out. The first few drops are permitted to escape, and the next five to ten c. cm. are collected in a graduated centrifuge tube. Usually the fluid comes in drops—one to three to the second. In appearance it resembles water. Not more than ten c. cm. are removed, and less if it drops slowly, as though a limited amount were present. The removal of large quantities occasions headache, nausea and vertigo. When performed as above described the procedure is practically painless. Two or three patients have complained of slight pain as the needle penetrated the deeper tissues; the majority experienced no unpleasant sensations, either during the operation or afterwards. A few even declared they felt better.

If performed under aseptic conditions and care is taken not to remove much fluid the procedure is not dangerous. A fatal result has been reported in a few instances, but this has resulted from conditions infrequently found, such as rupture of a softened cerebral tumor[10] or rupture of an aneurysm of the vertebral artery.[11] Dana[3] regards the operation as harmless, although agreeing with others that care must be exercised in cases of brain tumor. Kopetzky[1] declares sclerosis and aneurysms of the cerebral vessels contraindications to lumbar puncture.

In reviewing the methods for enumer-

ating the lymphocytes in the spinal fluid, a wide divergence in technic is apparent. Nearly all writers agree that the cellular content must be concentrated by centrifuging. The majority then remove a drop of the sediment with a pipette, place it on a slide, dry and stain it, and in a rough way determine whether there be few or many cells in the microscopic field. It is evident that there are many chances for error in this method, and that the final result is only approximate. Kramer[5] made an exact count with the blood-counting apparatus. This appears much more accurate. No details of his method are given, but after some experimentation I devised the following method and have followed it in all of the cases reported.

The fluid as collected is centrifuged for ten minutes. All but the lower 1 c. cm. is then decanted by a pipette and preserved for chemical examination. To this lower c. cm. are added three platinum loopfuls of methylene blue, making no practical difference in the volume, and making the lymphocytes easy of recognition. The fluid is thoroughly stirred with the wire to secure an even distribution of cells throughout its volume. A drop is then placed on the counting-chamber, and its cells counted as in blood work. Calculations are then easily made, reducing the count to the basis of cells per cubic millimeter of unconcentrated fluid. The results obtained in normal fluid correspond exactly to Kramer's results.

Following the technic above described, lumbar puncture has been performed on 25 patients, viz., two cases of dementia praecox; one of epileptic insanity; two of the manic-depressive type; one case of syphilitic brain tumor; four classed as organic dementia; three others in which the psychosis is accompanied by tabes dorsalis; and twelve in which the diagnosis is paresis. The results of the lymphocyte count are given in the accompanying table:

NO	NAME	AGE	DIAGNOSIS	DURAT'N	PRESENT CONDITION	LYMPHOCYTES PER C. M. M.	REMARKS
1	F. D...	25	Dementia Praecox..	3 yrs.	Marked dementia.....	1.5	Normal number 0–2
2	W. M...	31	Epileptic Ins.....	16 yrs.	Good health.....	1.1	
3	R. V. H	41	Manio-Depressive...	22 yrs.	Elation.....	1.9	
4	J. S. D.	44	Manio-Depressive...	2½ yrs.	Depressed.....	1.3	
5	F. K.	51	Dementia Praecox..	11 yrs.	Marked dementia.....	.6	
6	M. G.	26	Brain tumor.....	1½ yrs.	Symptoms of tumor and pressure.....	1.2	Syphilis 5 years ago
7	G. B. D.	48	Organic Dementia...	2¼ yrs.	Ataxic speech and gait; exaggerated tendon reflexes; marked arterio-sclerosis....	1.3	Condition was preceded by vertigo
8	B. A.	45	Organic Dementia, Cerebro-spinal sclerosis.	10 yrs.	Active reflexes. Right hemiplegia.....	2.2	
9	E. N.	45	Organic Dementia...	4 yrs.	Reflexes normal.....	3.	Syphilis

10	H.L.F.	56	Organic Dementia...	21 yrs.	Dementia; tendon reflexes absent; Argyle-Robertson pupils.....	.77	Probably syphilis
11	L.McD.	31	Tabes, Organic Dementia....	6 mos.	Cannot walk; knee jerks absent; elbow present;Argyle Robertson pupils.....	78.	Probably syphilis
12	A. D.	45	Tabes, Organic Dementia on another psychosis.....	8 yrs. Tabes	Dementia; ataxia; no knee jerks; immobile pupils.....	42.	May be an irregular paretic.
13	E.E.J.	58	Tabes, Paresis.....	9 mos. Paresis.	Argyle-Robertson pupil; tendon reflexes absent; few mental symptoms; has improved since admission ...	17.	Tabetic arthropathy. 2½ yrs
14	E. H.	40	Paresis.....	11 mos.	Tendon reflexes absent; immobile pupils; ataxic; demented.....	41.	Failing rapidly.
15	F. G.	52	Paresis.....	1 yr.	Absent tendon reflexes; Argyle-Robertson pupils.....	16.3	Elated.
16	W.F.G.	39	Paresis.....	2½ yrs.	Feeble, demented; knee jerks exaggerated; pupillary reaction present.....	58.	Rapid failure.
17	C.G.W.	40	Paresis.....	11 yrs.	Right knee jerk present on reinforcement; left knee jerk absent; left pupil larger than right.....	.75	Able-bodied worker.
18	A.A.	50	Paresis.....	18 yrs.	Marked mental deterioration; immobile pupils; absent tendon reflexes.....	4.6	Syphilitic. Able-bodied.
19	B. B.	57	Paresis.....	12½ yrs.	Marked dementia; knee jerk sluggish; pupils react slowly; gait slightly ataxic....	1.5	Able-bodied.
20	W. B.	57	Paresis.....	2¾ yrs.	Immobile pupils; knee jerk exaggerated; right hemiplegia; motor aphasia 2 yrs	55.	Rapid failure.
21	G. S.	52	Paresis.....	2½ yrs.	Argyle-Robertson pupil; ataxic speech.....	25.	
22	M. F.	26	Paresis.....	1¼ yrs.	Exag. tendon reflexes; dementia rapidly advancing.....	7.5	
23	E.McI.	45	Paresis.....	10 mos.	Pupil reflexes normal; tendon reflexes exaggerated; remission at present.....	4.3	Syphilis.
24	F. B.	31	Paresis.....	3½ yrs.	Immobile pupils; absent ten. reflexes; condition advancing.....	27.6	Syphilis.
25	W. F.	52	Paresis.....	2 yrs.	Tendon and pupillary reflexes absent. Much dementia....	49.	Syphilis. Failing rapidly.

Of the first five cases appearing in the table, nothing further need be said than that their lymphocyte counts are normal. The case of brain tumor (number 6) also shows a normal count. A practically untreated syphilis has been in existence for the past five years.

The symptoms of the seventh patient are strongly suggestive of paresis, but the lymphocyte count is normal. In view of the presence of a marked arterio-sclerosis and the history of persistent vertigo, his condition is probably due to changes produced by arterio-sclerosis. Patient number eight is primarily one of cerebro-spinal sclerosis, and presents a normal lymphocyte count. The next two organic cases, both probably syphilitic in origin, are stationary and show no evidence of meningeal irritation.

The three cases of tabes, it will be seen, show a decided lymphocytosis. All show characteristic disturbances of tendon and pupillary reflexes. Fischer's theory of the parallelism between a high lymphocyte count and extensive or rapid involvement, affords an explanation of the marked differences in the three counts. The first case (number 11) is an acute one, advancing steadily and already showing considerable involvement. The second is more chronic, but is at present progressing; while the last has never had as extensive involvement as either of the others, and is at present better than when admitted six months ago.

A study of the twelve cases of paresis affords an interesting confirmation of the theory of parallelism just repeated. Cases 14, 16, 20 and 25 are all cases in which the pathological changes seem to be rapidly advancing. Case 16 was first classed as an alcoholic. Three months after his admission a note states, "Physical examination fails to show any symptoms suggestive of organic cerebral changes." Nine months after his admission, manic-depressive insanity was suggested, and that diagnosis was apparently held for nearly a year. During this time he was disoriented, often excited, very delusional, and hallucinated. During the last part of 1905 evidences of organic involvement appeared and have since progressed rapidly, as a count of 58 would indicate. Whether a lymphocyte count would have thrown any light on his condition two years ago is merely an interesting speculation.

The very low counts in cases 17, 18 and 19 are now understood and do not disprove the diagnosis of paresis. They are all old cases, in which the disease has been at a standstill for years. Although showing on neurological examination evidences of organic changes, their histories show that these changes took place some time ago, and no evidence of pathological progression has been observed recently. On the contrary all three are able-bodied individuals. The low counts are merely laboratory confirmation of the fact already noted clinically, that the disease processes are checked and have been checked for a long time.

In this conection it is interesting to compare case 23. Although a case of recent origin, the neurological findings would indicate that the disease had never progressed far. Since coming to the asylum a decided improvement in her physical condition has taken place, amounting to a remission. It is possible that a fall in the number of lymphocytes occurs in every remission. There is no work on this subject re-

ported in the literature. A thorough investigation of the matter would be of considerable interest.

The remaining cases, 15, 21, 22 and 24, are of no special interest in this connection.

Conclusions:

1. An increased lymphocyte count denotes meningeal irritation.

2. No lymphocytosis is present in cases of dementia præcox, epilepsy, manic-depressive insanity, or arterio-sclerosis.

3. An increase of the lymphocytes seems to occur only with paresis or tabes, and its presence in a case in which tabes can be excluded is evidence of paresis.

4. As a rule the degree of cellular increase is proportionate to the amount and rapidity of pathological change.

5. A normal lymphocyte count is not proof of the absence of paresis. It may mean only an arrest in the progress of the disease.

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Simple incision is not sufficient in the treatment of Bartholinian abscesses. They should be cauterized daily with iodine, and if they recur, excised.

When opening a retropharyngeal or peritonsillar abscess in a small child, by the buccal route, have the head dependent and instruments at hand for tracheotomy. These instruments are needed but rarely, but then urgently.

In chronic osteomyelitis of the jaw it is better to wait months for a sequestrum to form than to operate a dozen times for the removal of necrosed bone.

When shaving the hair in the neighborhood of a boil, draw the razor from the base to the apex so as not to drive micro-organisms deeper into the tissues.

Exposure to the X-rays causes atrophy of the sweat glands; radiotherapy is proving the most satisfactory treatment for hyperidrosis.

Catheterization sometimes makes the evidences of "appendicitis" or "abdominal tumor" vanish with the escape of the urine from a distended bladder.

When suturing a wound of the scrotum, if the tissue (dartos) is contracted, apply a warm compress for a moment to cause relaxation.—*Am. Jour. Surg.*

URIC ACID DIATHESIS*

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Stanton

The history of uric acid dates back to a time easily remembered by American physicians. Karl W. Scheele, in 1776, and later but in the same year, T. Bergman discovered this substance as a constituent of stone in the bladder, and soon after it was recognized as a normal ingredient of the urine. In normal urine, when fresh, the uric acid and urates are always in solution; but after standing from 12 to 24 hours, a reddish-gray or brick-dust sediment forms, making the urine turbid, but it readily clears up on heating. If this deposit forms in a few hours' time, it is due to excess of uric acid and urates. If allowed to stand for some time, the microscope will reveal free crystals of uric acid. The brick-dust sediment consists of amorphous urate of soda, but at times there is in combination with it, crystals of urate of soda and uric acid.

Diathesis is the natural or congenital predisposition to a special disease.

Lithemia is an excess of lithic or uric acid and the urates in the blood. It is due to imperfect metabolism of the nitrogenous elements.

Uricacidemia is the accumulation of uric acid in the blood,—same as uricemia.

Uric Acid Diathesis, then, is a natural or congenital predisposition to the accumulation or excess of uric acid and the urates in the blood and tissues of the body.

Frequently an excess of uric acid takes place in the body without the uric acid diathesis, yet these terms, namely: Uric acid diathesis, uricacidemia, uricemia and lithemia are so closely associated that no attempt will be made to separate them; and, while the subject matter of this paper will have reference mostly to cases of this special diathesis, it will not exclude those cases in which there is an occasional excess of uric acid, for it would be a difficult matter to draw the line.

It has been demonstrated that the oxidative origin of a large portion of uric acid is derived from the nucleins and purin derivatives in our food. Nuclein is a phosphorized proteid ($C_{29}H_{49}N_9P_3O_{22}$) forming the essential constituent of the nuclei of cells. The products of nucleins in the process of metabolism are the xanthin bases,—as purin, $C_5H_4N_4$; hypo-xanthin, $C_5H_4N_4O$; xanthin, $C_5H_4N_4O_2$; uric acid, $C_5H_4N_4O_3$.

According to Schittenhelm and Mendel, from newer observations, it appears that the spleen, lungs, liver, intestines, muscle and kidney are all capable of converting purin bases into uric acid; and that the kidney, muscle and liver can, in turn, further disintegrate the newly formed uric acid.

There are many others belonging to this class: Caffein of tea and coffee, theo-

*Read before the Montcalm County Medical Society, April 12, 1906.

bromin of cocoa and theopholin are all purin bodies capable of transformation into uric acid. Meat contains large quantities of xanthin and purin bodies; sweetbreads, peas, beans, mushrooms, asparagus and beer are all rich in purin bodies. Bouchard gives the amount of xanthin and urates in the following articles: Meat extracts contain 63 grains to the pound; tea, 175; coffee, 70; and cocoa, 59. It matters not whether these xanthin bases get into the blood as hypoxanthin, xanthin, uric acid, or caffein the effect upon the blood-pressure and the system in general is the same.

Just so long as man is careful with his diet, eating nothing to produce an excess of urates and uric acid in the system, and continues to excrete these substances in normal quantities, just so long may he expect to remain in good health,—barring contagious diseases and accidents. But, on the other hand, let him eat large quantities of meat, game, poultry; drink wine, beer, strong cider, tea and coffee; take his ease with no exercise to produce perspiration, and he will soon be in a condition to develop disease.

Uric acid and urea are very closely related to each other. In health they maintain a marked proportion to each other, and when this regular proportion is interfered with, something has gone wrong in the human economy. Uric acid yields urea as one of its oxidation products, and experimenters were led to accept two hypotheses,—either all albumin, on oxidation to urea, passes, at sometime or other, through an uric acid stage, or albumin is normally oxidized directly to urea, but under certain pathologic conditions to uric acid instead.

The amount of urea excreted in 24 hours by a man in health and weighing 140 pounds, is about 400 grains, and as uric acid should be in relative proportion to urea as 1 to 40, the same man should excrete normally about 10 grains of uric acid. Bishop says: "When this proportion is disturbed by a relative increase of the uric acid, certain disturbances of a vascular and neurotic character arise."

For many years Alexander Haig was a sufferer from migraine, and studied very extensively in his own person the relation of uric acid to the production of attacks of this disease; and while thus suffering from migraine he found the uric acid increased to the proportion of 1 to 20 or 25 of urea, whereas before and after attacks he found it was 1 to 40, and the headache was proportionate to the excess of uric acid over the urea, and not to the amount of alkali used to bring the uric acid out.

Bishop found the proportion of uric acid to urea in hay fever as high as 1 to 25 and 1 to 13, while 21 grains were being excreted in 24 hours. The disorders of the nervous system that Murchison associated with lithemia are: "aching pains in the limbs, lassitude, pain in the shoulders, hepatic neuralgia, severe cramps in the legs, headache, vertigo and temporary dimness of vision, convulsions, paralysis, noises in the ears, sleeplessness, depression of spirits, irritability of temper, cerebral symptoms, and a typhoid state."

Haig maintains that the presence of uric acid in excess accounts for the exacerbations of pain in rheumatism and gout.

Bishop says: "In persons suffering from intense pruritus, uric acid and the urates have been found in excess."

Haig says: "Uric acid in the blood in

excess contracts the arterioles and capillaries all over the body, producing the cold surface and extremities, raising the tension of the pulse and slowing the heart."

Thomas G. Mays attributes attacks of angina pectoris to the increased formation of uric acid, which is incidental to the gouty and rheumatic diathesis, and agrees with Haig in attributing migraine to the irritating effects of the uric acid.

During the preparation of this paper I received a reprint of a well written article by Dr. A. B. Conklin on "Cardio-vascular Changes Due to Lithemia." In this paper the high arterial tension is recognized as being due to lithemia, and that arterio-sclerosis is a result of high arterial attention; and, as the maximum blood pressure is nearest the heart the coronary articles are the first to suffer, so that disease of the coronary arteries predisposes to attacks of angina pectoris and only requires some excitement or a lithemic condition, as the exciting cause or causes, to increase arterial tension and bring on an attack. While atheroma of the coronary arteries predisposes to angina pectoris, this affection may result from hypertension alone, which is shown by the absence of coronary disease or other structural changes in some fatal cases.

N. S. Davis and others add the following to the list of manifestations of uricacidemia: "Loss of appetite, nausea and vomiting, flatulent indigestion, diarrhea, intense itching, asthma, blindness, deafness, numbness of the skin and creeping sensations, neuralgia, sick headache, irritability of temper, etc."

Rachford, Filehne, Paschkin, Sajous and Croftan attribute these toxic symptoms to the alloxuric bases,—xanthin, hypoxanthin, adenin and guanin, and not to uric acid; and in the opinion of Sajous it is by their direct influence on the adrenal secretions;—so then if it is your pleasure to believe that these symptoms are due to the alloxuric or purin bodies only, perhaps during their transition stage to uric acid; and that, as is claimed by some, that inflammation of the fibrous tissues is due to these same substances, making a suitable soil for the action of disease germs and the deposition of urates, it matters little, for they are all derived from the nucleus of our foods and various tissues of the body in the process of metabolism.

Under favorable conditions the administration of phosphate of soda or some other alkali by increasing the alkalinity of the blood and causing too rapid elimination of uric acid products will have the same effect upon the circulatory and nervous system, giving rise to increased blood pressure and other symptoms attributed to the lithemic condition. In one person it may be an attack of migraine, in another an attack of gout, asthma, nervous catarrh, headache and in epileptics, a fit.

In these cases of uricacidemia, if we diminish the alkalinity of the blood by the administration of phosphoric or some other acid, we free the blood from uric acid by driving it back into the tissues; the arterioles become relaxed, and the headache, mental depression and other symptoms are relieved. Bishop says: "When the nervous system is depressed by fatigue, deficient food, etc., a smaller amount of uric acid in the blood will suffice to produce disturbance of function than at other times." Heredity is probably the chief factor in determining the

direction in which the uric acid diathesis will affect an individual, whether it results in rheumatism, gout, migraine, angina pertoris, asthma, nervous catarrh or some other neurosis." The attacks due to uric acid come on morning after morning about the same time. This is accounted for in this way: The blood is the most strongly alkaline from two to nine a. m. During these hours, the blood is the most heavily charged with uric acid, and it is during these hours that patients suffer most from angina pectoris, migraine, hay fever, and other functional nervous disorders. The blood is the least alkaline during the hours of bodily activity, or between the hours of 12 o'clock noon and 12 o'clock midnight,—the lowest point of alkalinity being at the latter hour. During this time, there is only a small secretion of uric acid and the amount circulating in the blood is small. As the alkalinity of the blood begins to increase towards morning, the uric acid is dissolved out of the more alkaline tissues in which it has been stored,—the liver, spleen, cartilages, joints and fibrous tissues,—and again thrown back into the blood, which becomes rich in uric acid, producing, if it becomes in excess, the nervous phenomena and other characteristic symptoms. If it is an acute attack of gout, it is ushered in by a diminution in the amount of uric acid excreted during the last two or three days preceding the attack. When the joint symptoms begin to appear, the amount of uric acid excreted increases and for some days remains much above the average, and then gradually gets back to normal.

To the experienced observer, symptomatology will account for as much as urinalysis in most cases, though the latter should by no means be discarded, yet the busy physician often finds it necessary to do so. A ravenous, insatiable craving for food is a condition which also marks the storing up of uric acid in the system, and may give timely warning of the approach of a headache, neuralgia, or other symptoms common to the uric acid diathesis. During these two or three days in which the uric acid is being stored up in the tissues of the body, the elimination of uric acid is diminished. Soon the limit is reached, there is a change, the blood becomes more alkaline, dissolving the uric acid out of the tissues of the body and we have lithemia, with a slow, high-tensioned pulse, nausea and vomiting, etc. Now the administration of acids will free the blood, drive the uric acid back into the tissues of the body and the pain and other symptoms subside.

The various tissues of the body are now loaded with uric acid and urates and unless proper means are taken to eliminate them from the system, their action upon the kidneys diminishes the excretion of urine and after a number of days they become more or less fixed in the fibrous tissues of the body. When deposited in the joints, the condition is called rheumatism, except in distal joints then it is called gout; when in the lumbar fascia, lumbago results; when in the fascia that forms the sheaths of the great nerve trunks, sciatica; when in the choroidal tissue, choroiditis results; and when those parts that support the various coats of the intestinal wall, the name is colic. The fibrous tissues of the pelvic organs, especially of women, may be attacked. Many cases of dysmenorrhea are relieved and even cured by following a course of treatment for

this condition. Both Haig and Mays are of the opinion that uric acid causes inflammation of all the fibrous tissues, both of the digestive and respiratory tubes of the larynx and esophagus on the one hand, and of the trachea, bronchi, lungs and pleurae on the other,—rendering the soil more suitable to be attacked by the germs of these diseases. If this be true, there is no fibrous tissue of the body which is not liable to be attacked.

Fevers in general, pneumonia and enlarged spleen cause increased retention of urates and uric acid in the body.

For the estimate of uric acid and urea in the urine I must refer you to the text-books upon this subject.

There are many so-called "uric acid" solvents on the market. Some of these are proprietary nostrums and are advertised to physicians. The exploiters of the majority of them make such extravagant claims in regard to wonderful cures that it is not safe to place any reliance upon them. I must beg of you to beware of them unless they are of known composition, with exact formluae, in which case they will speak for themselves as to whether they are useful in lithemia. The fact that these remedies dissolve uric acid in a test-tube, outside of the body, is no proof that they do so withing the body any more than we would expect the administration of the mineral acids to dissolve the lime salts out of our bones. It is our duty to study these cases scientifically as much as possible, including the remedies to be used for these conditions; for if not, we will find ourselves in many cases prescribing empirically.

In the treatment of these cases, our effort must be made to prevent the accumulation in excess, or the deposition of uric acid or urates in the body. This has been attempted in various ways: (1) By lessening the amount of uric acid formation in the system; (2) by trying to increase uric acid excretion; (3) by increasing uric acid destruction; (4) by dissolving and removing these deposits after they have once formed.

Numbers (1) and (2) will be considered together. To increase uric acid excretion it is necessary to increase the excretion of urine and this is thought by many to be best affected by copious water drinking. Waugh says: "The lithia waters have obtained quite a reputation, the greater part of which is due to the water, very little to the lithia."

Hare in his latest edition of "Practical Therapeutics" says: "Haig has pointed out that although lithium forms salts with uric acid in the test-tube, in the body it has a greater affinity for the acid sodium phosphate in the blood, and practically leaves the uric acid to itself. This is an important point, since it proves that the large amount of water generally taken with lithium salts has more to do in relieving gout than the lithia."

Haig has come to look upon water drinking for the cure of uric acid diseases as practically useless. We will admit this to be the case when there is a high-tension pulse with its consequent symptoms at which time he says that the capillaries in the kidneys are contracted, blocked with urates and excretion diminished. Here Haig says the drinking of much water will increase blood pressure and aggravate all the symptoms. In this case, a little acid should be given to drive the excess of uric acid out of the blood and then the uric acid elimination should be begun more gradually. This blocking up of the capillaries with

urates and other effete material takes place all over the body and Haig attributes it to a collemic or gelatinous condition of the blood due to excess of uric acid. In the sluggish circulation from this cause it takes three or four seconds for the blood to return in the capillaries, after pressure on the back of the hand, whereas it should normally return in one and one-half to two seconds. On this account, metabolism is slow and the strength which we should get from albumin assimilation is retarded.

In the use of lithium salts, the carbonate has been recommended in the belief that the lithium united in the blood with uric acid to form urate of lithia, but this is not the case as the affinity is for the stronger bases,—sodium and potassium. When lithium carbonate is given by the mouth, the hydrochloric acid liberates the carbonic acid and forms lithium chloride, enters the blood as such and is eliminated by the kidneys without further change, as lithium chloride. Clinically it has been proven that it does increase the excretion of urine and is, therefore, an efficient diuretic. The other salts of lithium,—citrate, benzoate and salicylate are all found useful. Bishop relies upon lithia to eliminate uric acid in preventing attacks of hay fever.

Hare states that Haig has proved that the salicylates all aid in the excretion of uric acid and thinks they relieve rheumatism in this way. Haig further says: That a common cold can at once be cut short by one or two fractions of a grain of calomel (gr. ¼ to ½) followed by salicylate of soda in 15 grain doses three times a day for a few days; and both Haig and Mays agree that the salicylates act by dissolving the uric acid out of the fibrous tissues. Salol is also useful, as it splits up in the intestinal canal into phenol and salicylic acid.

Zerner and Ritter, who have worked on this subject, have proven conclusively that di-sodium phosphate is one of the most important solvents of uric acid in the urine and possesses the power of hindering the decomposition of urates into free uric acid.

There are three sodium salts formed from phosphoric acid as follows:

Phosphoric acid, H_3POO_4.
Mono-sodium phosphate, NaH_2PO_4;
Di-sodium phosphate, Na_2HPO_4;
Tri-sodium phosphate, Na_3PO_4.

The di-sodium phosphate and the mono-sodium phosphate occur in the urine normally. The uric acid of the urine is held in solution by di-sodium phosphate and precipitated by the presence of mono-sodium phosphate. Then to prevent lithemia and its results, and the formation of uratic calculi we must increase the di-sodium phosphate and decrease the mono-sodium phosphate. This can be accomplished by decreasing the phosphoric acid or by increasing the sodium.

The nucleins of all our albuminous foods are rich in phosphorus and by the process of oxidation in the system it is converted into phosphoric acid. We also take some with our food in the form of phosphates. Then in order to lessen the formation of phosphoric acid in the system we must limit the ingestion of albuminous foods which are rich in nucleins and purin bodies. Phosphoric acid is also derived, both from disassimilation of food proteids and the catabolism of the proper tissues of the body, and it is that, derived from these sources,

which we can control, remove from the blood and tissues through other channels than the kidneys, by the administration of calcium salts. For this purpose, calcium carbonate is found useful, although lime-water may be given. von Noorden was the first to advocate the calcium salts to combat lithemic conditions and they are now similarly advocated by Dr. A. C. Croftan, of Chicago, who says: "In the first place calcium forms insoluble salts with the alkaline phosphates contained in our normal food, and in this way prevents the absorption of this moiety into the blood. In the second place, calcium, owing to the great affinity it possesses for phosphoric acid, combines with the phosphoric acid encountered in the blood stream, and this proportion is subsequently eliminated in the form of calcium phosphate—not, however, through the kidneys, but in great part through the intestine. This is an important point, for in contra-distinction to sodium, potassium and magnesium, all elements that are chiefly eliminated through the kidneys, calcium is principally (85 to 95%) eliminated through the bowels."

"It will be seen, therefore, that calcium given by mouth can, first, prevent the entrance of preformed phosphoric acid (phosphates) from the food into the blood, and can, secondly, prevent the phosphoric acid formed in the organism from passing into the urine by causing its elimination through the intestine."

The second part of the proposition, the increasing of the sodium in the renal blood, can be accomplished by the administration of sodium salts by mouth, but this treatment should not be followed up for long periods, for the reason that it is dangerous to keep the urine continually alkaline. Normal urine is faintly acid and should be kept so. Calcium salts given in large doses never render the urine alkaline. Colchicum may be mentioned as one of our highly efficient remedies, especially in plethoric persons. Piperazin, lysidin and lycetol are chemical compounds made in Germany. They are remarkably efficient in eliminating uric acid, but their prices are exceedingly high.

The subject of diet is an important one and needs as much attention, if not more, than the medical treatment. What one person can eat with impunity, others can not eat at all.

Dr. Geo. S. Kieth in his book called "Plea for a Simpler Life," says: His migraine improved very greatly when he gave up butcher's meat in favor of fish, fowl, game and eggs. These latter are quite rich in uric acid content yet have much less than beef and veal—the veal has much more than the beef, and liver most of all. Tea, coffee, cocoa, peas, beans, asparagus and mushrooms have been mentioned. These, including meat, diminish the alkalinity of the blood. Coffee relieves uric acid headache by diminishing the alkalinity of the blood and driving the uric acid out into the tissues. Eating meat will act in the same way, but this is putting into the system more poison which has to come back through the blood in order to be eliminated.

We give the following list of foods which make up a uric-acid-free diet: Milk, containing 4% albumin; bread, containing 8% albumin; cheese, containing 33% albumin; cereal foods, containing 5 to 12% albumin; nuts and almonds, containing 5 to 25% albumin; dried fruits, containing 3 to 5% albumin.

In addition to the above, fruits, garden vegetables, including potatoes, may be selected to suit the taste and they all favor the alkalinity of the blood. A person whose system has a large amount of urates deposited in the tissues may bring about an attack of migraine or other symptoms by eating a hearty meal of potatoes which renders the blood more alkaline, with the evident result of excess of uric acid in the blood. Haig says: "Milk does not harmonize with meat, beer, wine nor tobacco." With a vegetable diet, sugar can be taken more freely without harm, but an excess of uric acid hinders the metabolism and combustion of sugar. Nuts are somewhat difficult of digestion unless thoroughly masticated. These can be eaten in the form of nut-butter, or better still is the "malted nuts." One pound of this, equals nearly three pounds of beef as to nourishment.

For convenience, the relative value of different foods are represented as containing so many calories or food units. One food unit represents about 3.7 grains. The number of calories of food units required daily for a person of medium weight is about 1800, divided as follows: Proteids, 200; fats, 400; carbohydrates consisting of starch and sugar, 1200.

Persons with sedentary habits require less and children require more in proportion.

To show the relative value of foods we give a short list representing the calories or food units per ounce of food:

	Proteids.	*Fats.*	*Sugar and Starch.*	*Total.*
Apples	.5	1.3	16.6	18.4
Beans, baked	8.	6.6	22.9	37.5
Bread, white	9.3	3.7	63.4	76.4
Cheese	31.7	38.1	00.0	69.8
Egg	16.3	32.	00.0	48.3
Malted Nuts	27.6	73.6	51.2	152.4
Meat	36.5	66.7	00.0	103.2
Potatoes	3.4	.4	28.9	32.7
Rolled Oats, cooked	3.6	1.3	13.1	18.
Rolled Oats, uncooked	19.5	19.5	77.2	116.2

In prescribing a diet for a patient suffering with lithemia, it is quite important that the change, if needed, be made gradually. In ths way, more and more of such articles rich in xanthin bodies can be omitted as found necessary to be conducive to the enjoyment of good health. A patient who has been partaking freely of meat, tea and coffee and perhaps beer and wine, will keep the blood less alkaline than it should be, and these persons will have a larger amount of uric acid and urates stored up in the tissues of the body. Now, if this meat diet is changed suddenly to a vegetable diet or nearly so, the blood is rendered too quickly more alkaline, the uric acid and urates are dissolved out of the tissues and thrown back into the blood, producing the condition known as lithemia with its high blood tension and other corresponding symptoms—and one of the real dangers from which we have been trying to free our patient.

The above is the diet briefly stated in a case of lithemia, and now we wish to give briefly the medical treatment. We will suppose your patient is suffering from a severe attack of migraine, hay fever, or some other disease or symptom referable to lithemia. You will first give some acid or the nitrites to drive the excess of uric acid out of the blood into the tissues and as soon as the pain and other symptoms are relieved you should follow a systematic course to rid the system from this poison.

To accomplish this result, phosphoric acid, citric or any of the mineral acids may be used, but Bishop, of Chicago, prefers the liquid acid phosphate, which is now sold in bulk. The dose is one-fourth to one teaspoonful, diluted in water, given frequently until desired

effect is obtained. Just at this time a cup of coffee whch renders the blood less alkaline, may be of great service, but is to be avoided if possible as you still add more uric acid in the system to be eliminated later. After the attack, say of migraine, has subsided, the acid in one-half teaspoonful doses should be given the following night at bedtime and in the morning and continue the bedtime dose for a few days longer so as to prevent the recurrence of another attack, which might occur at night owing to the high alkalinity of the blood at a time when the organism contains an excess of urates.

Within 24 to 48 hours after the attack of migraine is relieved, steps should be taken to eliminate systematically the uric acid from the system by medical treatment, beginning with moderate doses at first and during the middle part of the day; for, pushing the treatment too fast on the start may preciptate another attack by increasing the alkalinity of the blood and too rapidly eliminating the uric acid. After a few days, if all works well, the acid may be left off and the uric acid eliminants increased and given more regularly. In place of the liquid acid phosphate we may use nitrate of soda, nitro-glycerine, or in angina pectoris, the amyl nitrite which is found so useful in relieving the high blood pressure. For uric acid eliminants, the lithium and calcium salts, the salicylates and colchicum are the most useful. Each has its strong advocates, but a very efficient preparation may be had by using these in combination. At times if it is thought practical to eliminate more rapidly, especially if the urine is found highly acid much of the time, the addition of sodium phosphate may be expected to give good results. If the deposits of the urates in the joints and fibrous tissues have become fixed, giving rise to rheumatic pains which are quite persistent, it is necessary to give the iodides in addition to the other eliminants, as the iodides alone tend to keep the blood less alkaline than normal, and so must be given in combinaton with other alkaline remedies.

The Early Ocular Signs of Dementia Paralytica.—HOLDEN presents a set of statistics of ocular signs seen in paralytic dementia which is particularly valuable because in all cases the coexistence of tabes dorsalis was carefully excluded, and because the observations were made fairly early in the course of the disease. Consenual pupillary contraction was eliminated in measuring the pupils, by covering the other eye. He found in a series of 70 cases, absence of the sensory pupillary reflex in 87%, a very high percentage considering the ages of the patients. In 28% there was complete loss of light reflex and marked sluggishness in another 21%. A few of those with diminished light reflex presented also a diminution in the convergent reflex. 70% showed pupillary irregularity, nearly one-half (45%) an inequality in the pupils; and more than half presented abnormally small pupils, allowance being made for age and refraction. Optic atrophy, frequently stated as present in a considerable percentage of cases, the author failed to note in a single case.—*Jour. Nerv and Ment. Dis.*, November, 1905.

Lumbar puncture must not be performed in cases of tumor of the brain. Sudden death has frequently happened in such cases.

A mass protruding from the rectum of an infant or child may be an intussusception and not a mere prolapse.

LOOKING BACKWARD.*

DAVID L. WALMSLEY, M. D.,
Detroit.

The task I have allotted myself is not an easy one. It has cost me much study to gather together the few points which I shall present, but should it stimulate your curiosity for delving deeper into the past, I shall feel repaid.

Hippocrates, the father of medicine, a Greek, born at Cos, B. C. 460, laid down this rule, which is worthy our consideration: "We must extract the rules of practical medicine, not from the sequeles of consequences, no matter how probable, but from experience directed by reasoning." While we honor him and many great men after his day, we now know that the greater fathers of medicine lived, died and left their marks behind them seven thousand years ago. This is revealed by the Papyrus Ebers, brought to light by the untiring efforts of the immortal George Ebers, and others. The translations of this disclose the fact that long ages ago a standard of medical knowledge existed that was equal to the present, if not superior. Among the contents of this papyrus is a carefully classified list of diseases and their treatment, too long a list, however, to permit reading in the limited space allotted me at this time. I will quote a few headings and descriptions of diseases, the names of which are familiar as if of yesterday, viz.: Diseases of the abdomen, abdominal tumors and swellings, obstructions of the abdomen, swellings of the inguinal region, affections of the stomach, œsophagus and pylorus, obstructions of the small intestines, inflammations, diseases of the liver, intestinal worms, belchings, cramps, jaundice and chlorosis, diseases of the bladder, and urinary organs, obstructions of the urinary passages, cystitis, retention of urine, polyuria, hematuria, diabetes, blood in the urine, hypertrophy of the prostate, stricture, dysuria and strangury in children. It mentions thirty diseases of the eye, and as liberally of every other organ of the body. Speaking of maternity, it gives methods to induce abortion, to prevent abortion, to replace a prolapsed uterus, to deliver a woman, to deliver the placenta, to restore the vagina to its normal condition, to prevent retention of urine, and to stop hemorrhage. It also gives instruction in hygiene, deodorizations, fumigations of dwellings, perfumes for women to render odor of the house, clothing and breath agreeable, remedies to destroy insects, reptiles, plant lice, to prevent wasps and mosquitoes from stinging, and to destroy rats and mice.

The toilet also came in for care; no less than 74 prescriptions alone for the hair—washes, dyes, oils and depilatories are given.

In this papyrus is a list of over 700 substances from the animal, vegetable and mineral kingdoms which act as stimulants, sedatives, expectorants, etc.

This valuable relic of medical history

*Read before the Wayne County Medical Society, April 2nd, 1906.

was taken from between the legs of a mummy in a tomb, in the Necropolis of Thebes.

There is much to be learned from a further investigation. I learn that recent exploratory research in the east has added valuable evidences of a high state of culture in other lines than medicine, which goes to bear out the truth of the evidence evolved from the Papyrus Ebers.

The Bible is said to cover 4000 years B. C. The Ebers Papyrus claims 7000 years B. C. Let us see, by the comparison of a few facts gleaned from the Bible, if we can bear out the evidence brought forth by this more recent discovery.

It is generally conceded that Moses wrote the Penteteuch and the first five books of the Old Testament. How many, if any, collaboraters he had may probably never be known, but the books contain some wonderfully clever sayings, and if read with a scientific eye, tracings of much value may be learned from them. The education of the Mosaic period was of a high order. The papyrus period antedates the Mosaic by 3000 years. The findings in the Necropolis of Thebes and elsewhere, further bear out the facts asserted by the Papyrus Ebers.

Let us quote a few Bible sayings for scientific comparison. Genesis contains, perhaps, the only true solution of the vexed question of the determination of sex. It is so simple an enigma, so ambiguous, that scientists have overlooked a world of knowledge clothed in a riddle of language. Listen—"and God said let us make man in our own image, after our own likeness; and God created man in his own image, male and female created he them." Here we have *male* and *female* spoken of long before Adam was put to sleep and woman made. Is it not opportune to reason backward from this enigma and conclude that in the male lies the determining selection of sex?

Scientific research has lately determined a fact of much importance upon which probably hangs the further elucidation of that vital point—the selection of sex. Fischer and Ostwald, of San Francisco, have evolved some striking features of fertilization in which they point out the division of the spermatozoön on contact with the ovum, in which they note the three parts of the spermatozoön —the head, body and tail—the tail piece lasting only until perfect contact of the head and body pieces, after which it is detached and thrown off before an astrosphere is produced, the astrospheres start from the middle piece, while the head piece swells markedly to form the male pro-nucleus. Further investigation will probably demonstrate the vexed question which it is fair to predict was better understood by the Mosaic people, who covered their wisdom under an enigmatical wording to preserve their ideas for us when our intellects are capable of delving into creative radiations.

Again—were these early writers acquainted with anesthesia, if not, why speak of the *deep sleep* of Adam while surgical work was being done of extracting a rib to make woman? These enigmas of the ancient writers if we understand them correctly, might reveal to us a storehouse of wisdom and help solve many apparently difficult problems. If we deny the inspiration of the Bible, and many do, it adds increasing interest to the writings and makes our curiosity keener and our admiration greater for the men who wrote the wonderful

thoughts that have been conundrums to the wise and foolish of past ages.

If the Old Testament owes its authorship to *man*, not plenary inspiration, then we must concede to its authors a wisdom superior to any of the present age, and grant there is nothing new under the sun. Again—was Moses acquainted with the germ theory? If not why did he purify his tents when beset by the plague (typhoid fever)?*

Did Moses understand prophylaxis? Let us quote his writings. Deuteronomy 23-13, "And thou shalt have a paddle upon thy weapon, and it shall be, when thou wilt ease thyself abroad, thou shalt dig therewith, and shalt turn back and cover that which cometh from thee." Why this prophylactic precaution if he did not understand the use of it in dispersing disease? Is there today any known better general prophylactic? At the time of this particular event in the life of Moses, he had an army of over 600,000 soldiers and a following of over one million and a half, camping on the field of battle, and they had been so camping for decades. Have we forgotten the state of our camps and consequences, during the Cuban war? Had we used the *paddle,* many soldiers would have been living and our reputation for superior germ destroying knowledge spared a jar. Need we wonder, looking toward Cuba, that the Japanese refused our surgical aid during their recent war?

The fact that Moses, a Jew, knew how to reduce gold to a powder, miscible with water and by this means potable, explains his knowledge of chemistry, a knowledge only attained by the highest masters of science and art of his day. So far as I know, it was an Egyptian formula, but, it is not strange that Moses should know of it, as he had been raised and educated in Egypt, at the court of Pharaoh. Medical literature in those days was considered sacred and was only open to the priest class and their associates.

Moses lived, as nearly as can be determined, in the fifteenth and fourteenth centuries B. C. His death date is given as 1451 B. C. The Bible is sufficient evidence that the peoples antidating its writing must have been a cleverly educated people. Profane history tells of the arts and sciences of those periods, which is vouched for by relics recovered from ruins, vaults and necropoles; some samples recently excavated of prehistoric times, are most beautiful in design.

On one of the tombs of the Egyptian grandees, which surround the pyramids of Sak Karch, that of Sekhet-enaukh, chief physician of the Pharaoh Sahura, of the fifth dynasty (B. C. 3533), is described how he healed the king's nostrils, for which his majesty wished him "a long life in holiness," and also the compilation of medical works assigned by tradition to one of the most ancient kings, Teta, the successor of Menes of the first dynasty. Menetho, the Egyptian priest and historian, tells us that this king wrote treatises on anatomy and surgery and performed surgical operations with flint flakes.

About 3300 B. C., in the reign of Cheops, during the building of the great pyramids, a medical papyrus, containing anatomy was found by a priest in a temple. We also know that the Egyptians

*The term plague is now regarded as typhoid fever and is so rendered in late Bible translations. The mode of clearing their tents was much as at present, using slightly different words to express the same act. They used the expression, "purify," while we use "fumigate." They used "incense," we use "antiseptics." Their incense was made of antiseptics, viz: stacte, galbanum, eucalyptus, and frankincense; onycha was a combination of antiseptics used at the time of this plague and long prior to it.

practiced embalming for over 5000 years B. C., and their process surely necessitated a knowledge of anatomy, therefore, it is reasonable to believe that this ancient people knew the structures of the body.

Pliny tells us that the Egyptians examined the bodies after death, to ascertain the nature of the disease of which they died. The Egyptians did not shrink from human dissections, consequently the study of anatomy was a matter of course.

In the present age it is a common custom among the people to have a medicine chest in their homes. We note that history gives the same custom among the ancient Egyptians, one such case having been found B. C. 2500, in the tomb of the wife of the Pharaoh Mentu'hoteps of the 11th dynasty. It was enclosed in a basket of straw-work, walled in a stone casing. It contained six cases, one of alabaster and five of serpentine, with dried remnants of drugs, two spoons, a piece of linen cloth and some roots.

The Bible contains many allusions to physicians and surgery. Joseph commanded his physicians to embalm his father. The terms, eyelids, apple of the eye, sinews, bones, abscess, inflammation, fever, etc., all going to show a familiar acquaintance with disease and remedies.

Apothecary and prescriptions are mentioned in Exodus 30:35. It says: "And thou shalt make it a perfume, a confection, after the art of the apothecary." Nitre and soda are spoken of in Jer. 2:22, showing a knowledge of chemistry.

Profane history abounds in evidence of a high state of medical as well as scientific education and arts. As corroborative evidence of a high state of medical and surgical education we have the Egyptian monarch Nakhapsus, of Sais, 700 B. C., who wrote on medicine. Homer describes the Egyptian physicians as the "sons of Pœon skilled above all men." In the Third Book of Herodotus is the following passage: "Cyrus sent to Amasis, B. C. 500, and bade him for an oculist, the best in the whole land of Egypt." Darius also sent hither for a body physician, and in the time of Liberius and Nero, Egyptian physicians regularly came to Rome, usually to heal skin diseases. The science of medicine among this ancient people was in the hands of specialists, who were called *Snu*. Homer, and later Herodotus, tell us that there was a specialist for each single disease, and what records we now possess of the Egyptians, after thousands of years of continued destruction, corroborate the latter, when he says "Egypt swarmed with physicians." They concealed their medical knowledge under the most mysterious formulas, much, perhaps, as we do today in prescription writing. The Egyptian physicians were noted ophthalmologists. All physicians of that period were required by law to use the prescribed remedies, showing there was a law governing the ethics of medicine at that early date. Thus, we find, from a thorough search for evidence, of the existence of our profession in the past. We have a continued history of Egypt for 5000 B. C., a prehistoric account of 2000, and a continuous culture known to us for 2000 more, hence a connected history extending over a period of 9000 years.

While I am writing these facts, Dr. J. P. Peters, of New York, is delivering a lecture in this city in the Museum of Art, on his expedition to and explora-

tions of Babylon, 1888, entitled "The Newest Discoveries in Babylon," in which he corroborates the Ebers Papyrus by a statement that civilization dates back over 7000 years. Thus we have learned that thousands of years before Christ there were learned men in Egypt who could make intelligent observations of disease, combine complicated prescriptions and use them with judgment.

A period of great importance has been that included from the manhood of Moses about 1550 B. C., to the present, extending over 3500 years. We shall cover a small portion of this time as speedily as practicable.

Among the great institutions of learning of this period is Alexandria, founded by Alexander the Great, B. C. 332, and which for many centuries held the sway in learning.

Here during the reign of Ptolemy Soter, dissections of the human body was permitted. Here it was that the two celebrated physicians, Herophilus and Erasistratus, became famous by anatomic discoveries, among which were the coverings of the brain, the ventricles of the brain, the accurate study of the eye, and the greatly improved operations for cataract. Increased knowledge of anatomy lead to greater advance in surgery. From the Alexandrian period up to 640 A. D., education, particularly medical, made rapid strides. Specialists of every branch and every man abiding by his own specialty, was in vogue. Dentistry, also, flourished at this period.

Aetius, of Amida, a Byzantine, is said to be the first physician in this period who mentioned diphtheria with allusion to paralysis of the palate. Paul, of Aegina, was one of those remarkable men whose ideas are centuries ahead of their times. He was essentially a surgeon. He advocated amputation of the breast for cure of cancer and extirpation of the uterus.

Avicinna, called the prince of physicians, of Arabia, was noted for the discovery of the contagiousness of pulmonary tuberculosis.

Arnold, of Vallanova, Peter, of Abano, of the 13th century, both great men of their period, had to flee their homes to save their lives from the persecutions of the church, nevertheless, their persecutors burned their bones for heresy, because they dared to believe that natural causes, not spiritual, produced disease. Arnold revived the search for some anesthetic for surgical purposes. He used inhalations of mandagara, opium, henbane and hemlock, by soaking a sponge in warm solution and inhaling fumes thereof.

All through the early middle ages, dissections of human bodies had been forbidden and it was not until the close of the 13th century that physicians were permitted, by order of the king, to dissect at least one body every five years. Still the religious zealots, whose zeal dethroned their better judgment, strove to stay the onward progress of science but, in the 14th, 15th, 16th and 17th centuries, right prevailed and the benefit to humanity is today evinced by the marvelous results of surgery of our period.

Another fact that bears strong evidence in favor of a spirit of advancement in medical knowledge, in these centuries, is the efficient hospitals and the liberal manner of the support of the same.

Lady Seidel, A. D. 918, opened at Bagdad, her hospital, endowing it with 300 pounds sterling per month. In 977, Emir-Adad Adaula, also erected an enor-

mous institution, with a medical staff of 24 officers.

By the end of the 12th century there were sixty medical institutions in Bagdad alone, free to all patients and supported by official charity.

The Mansuri Hospital at Cairo, eclipsed all others so far erected, and the yearly endowment was $125,000. Each patient, on leaving this hospital, was handed some pieces of gold coin that he need not work until fully restored to health. A novel feature of this hospital was the large halls, one in which music was played day and night, to sooth the melancholiacs; one where religious readings and prayer were kept up constantly by a staff of fifty chaplains; one hall for story telling. Fountains were in each court, and there were lecture halls and isolation wards for contagious diseases.

Thus, looking backward, from the present to the earliest periods of history we can trace the mental calibre of the ages from the perfect man Adam to the relics of today.

Note.—I wish to acknowledge my indebtedness to Carl H. Von Klein, M. D., of Chicago, for extracts from his valuable translation of the Ebers Papyrus; also Fischer & Ostwald, San Francisco, on Fertilization.

THE PRINCIPLES OF TREATMENT OF CORNEAL ULCERATIONS.*

CALVIN R. ELWOOD, M. D.,
Menominee.

"Ulcerative keratitis is a manifestation of an infection which is permitted to gain access to the tissues through breakage in the corneal epithelium. The objective symptoms vary with the extent of the tissue involved, the virulence of the infection and the ability of the tissues to resist. The subjective symptoms vary with the extent and location of the tissues involved, the virulence of the infection and also with the general condition and temperament of the patient."—Bulson.

The affection is recognized by the loss of transparency of the corneal tissues and the presence of a grayish or yellowish infiltrate of the ulcerated area. The visual impairment is very slight if the ulcer is peripheral, but greater, the nearer the ulcer is to the pupillary area. It must be borne in mind that the corneal ulceration is repaired by the formation of scar tissue which is not transparent and that consequently there is sure to be some impairment of vision after the healing of an ulcer, any part of which is located within the pupillary area. This impairment will often be much greater after treatment is discontinued than during treatment, as atropin is generally used and with a dilated pupil the patient can see around the cicatrix better than after the pupil has assumed its normal size. The majority of cases of corneal ulceration are complicated with a greater or less amount of iritis and conjunctivitis.

The most common form of corneal ulceration is the result of simple traumatism. The denuded area, at first transparent, may become covered with a grayish infiltrate and if infection occur the ulcer extends. The superficial and

spreading ulcers, designated as mycotic keratitis, are often difficult of recognition. I was called recently to see a patient who, several days previously thought he had gotten a cinder in his eye. Careful examination of the lids and cornea did not reveal a foreign body and oblique illumination showed no break in corneal epithelium. Symptoms, however, were rather pronounced and a drop of fluorescein was instilled which revealed a considerable area of discoloration. With this conclusive evidence of destruction of the corneal epithelium I advised the patient to give the eye careful treatment for a few days. He declined and subsequently consulted another oculist who told him there was but a slight inflammation of the lids. It took me nearly six weeks to convince this individual of the correctness of my diagnosis and by that time the ulcer, although superficial, had spread over so large an area that frequent phenol cauterizations were necessary. This case, as many others, has demonstrated to my satisfaction the great diagnostic value of fluorescein.

Should an ulcer become infected, it is liable to extend both in area and depth, to be complicated by iritis and sometimes cyclitis and there will be noticed an accumulation of matter resembling pus in the anterior chamber. This condition, known as hypopion, is not pus but an accumulation of fibrin and leukocytes from the vessels of the iris and ciliary body. It may, however, become infected from without in case of perforation of the cornea, in which event panophthalmitis is liable to develop.

Corneal ulceration may result from foreign body, everted eye-lash or erosion from injury. It may occur without external cause in those of impaired vitality through disturbance of nutrition, particularly in a child of strumous diathesis. Owing to the possibility of all simple ulcers becoming infected and our limited knowledge of the virulence of the various infectious processes, it is wise to consider every case of corneal abrasion carefully. When one considers the large number of emery particles and other foreign bodies which are removed under the most septic conditions by fellow workmen, and the various other conditions which favor corneal infection, it is surprising that so few simple epithelium abrasions become infected. When the simple ulcers become infected, the ulcerative area presents a yellowish point surrounded by a zone of infiltration and with a tendency to increase in size and depth. A sloughing ulcer is the most virulent of all. It may arise from the most trivial injury, spread rapidly and frequently results in complete destruc-cornea. The serpiginous ulcer of Saemisch, a type of this form of ulceration, is the result of pneumococcus infection and frequently results in complete destruction of the cornea. Corneal ulcers of any character should be treated on strictly surgical principles. In the case of foreign body in the cornea, the eye should be bathed with boric acid, 1-5000 bichlorid, 1-3000 formaldehyde or similar antiseptic solution, carefully cleansed and it is usually better if argyrol be instilled afterward, or if the foreign body was very probably septic, it is wise to take the additional precaution of touching the surface with pure formaldehyde or tincture of iodin.

If, notwithstanding these precautions, the ulcer become infected, the most careful attention should be given to cleanliness and the removal of all possible

sources of further infection. Irrigation with boric acid solution or 1-5000 cyanid of mercury should be employed several times daily. If there is any secretion, 20 to 40 per cent argyrol solution, twice or three times daily, should be used, and in the more serious cases the infection is best checked by the application of the galvanocautery. This is one of the most valuable, but at the same time most dangerous, ophthalmic instruments, its use is certain to result in the formation of corneal opacity, and for that reason must not be used when it can be avoided. Before the employment of the galvanocautery, fluorescein should be instilled, and only the discolored area destroyed. It is of interest in this connection to note that after the application of cocain, fluorescein will stain a much larger area than before as the result of the dessicating effect of cocain upon the epithelium.

No little skill, the result of experience, is necessary in the use of the galvanocautery. It is my practice to use a small pointed electrode or the rounded tip suggested by Dr. Knapp, heated only to a dull cherry red, with interrupted and delicate applications. Cauterization should be carried to the healthy tissue only. Great care must be exercised that the electrodes be heated to only cherry red, as no less expert surgeon than Herman Knapp reports a case of cataract in a 14-year-old boy, which he is convinced resulted from overheating of the aqueous, from too hot a corneal cautery electrode. The method formerly advised by him of perforating the corneal ulcers with the electrode, I have seldom followed. During the past year I have had but two cases in which I thought perforation justifiable. In these there was severe infection, a large hypopion filling almost one-half the anterior chamber and the condition was complicated by marked cyclitis. The perforation of the base of these ulcers resulted in the discharge of the hypopion through the opening formed, almost instant relief from severe pain and satisfactory convalescence. It, however, also resulted in the formation of a dense central corneal opacity, but this under any conditions, would have been unavoidable, as the ulcer extended almost through the substantia propria to Desimet's membrane. In these cases I feel that perforation was perfectly justifiable, as without such heroic measures the area of infiltration would almost certainly have extended with increased scar and the possibility of intraocular complications, whereas, now an optical iridectomy promises serviceable vision. Should the ulcer become dormant, corneal repair may be hastened by the application of tincture of iodin. This has a desirable stimulating and antiseptic action that is of great value. Phenol cauterization is especially indicated in corneal ulcers of the mycotic type. In these conditions it has been a matter of much satisfaction to me to stain the ulcer with fluorescein and gently touch this area with a pointed tooth-pick moistened with pure phenol. The next day it will be found that only a portion of this area will stain, and to this region the application may be repeated. My results from phenol cauterization have been disappointing in deep ulcerations.

Subconjunctival injection of the cyanid of mercury is highly endorsed by Darier, of Paris, by Bulson, Gifford, Fox and others in this country, in the more serious infected central ulcer with hypopion. Darier's high standing demands

careful consideration of any form of treatment which has such enthusiastic endorsement as the following: "When one must combat an infection, acute or chronic, primary or secondary, arising from the outside by an erosion of the cornea, or a serious traumatism, or from the interior by a reflected or ametastatic infection, (as from syphilis, rheumatism, tubercle, etc.) subconjunctival injections of cyanid of mercury furnish us with a most active and rapid means of stopping the morbid local process, often even after general treatment has failed or acted too slowly." These injections are employed in the serious infectious cases, in which because of location or for other reasons, galvanocauterization is not desirable. The formula employed is usually the following: Cyanid of mercury 1 centigram, sodium chlorid 1 gram, aqua distill q. s. to 50 grams, injected under the conjunctiva. If to this preparation is added 1/12 of 1 per cent of cocain, the injection is practically painless. My experience with subconjunctival injections, except in hospitals during postgraduate study, has been limited, but I shall certainly try it when proper indications arise. In one case seen in consultation, I believe it checked the destructive process in a serpentine ulcer, when all other methods had failed. Darier attributes its benefit to antiseptic and lymphagogue action.

Probably the most valuable recent addition to the armamentarium of the oculist is dionin, a morphine derivative, analgesic and lymphagogue in its action, and in the treatment of corneal ulcers of great service. I am in the habit of using it in 10 per cent solutions, employed two or three times daily. What effect is obtained is usually during the first 72 hours, as after prolonged use it is inert. When first employed the effect of dionin is sometimes startling. Such excessive chemosis may result that the conjunctiva will protrude between the lids. This, however, is not painful, and soon subsides, giving the patient greatly increased comfort. As an anesthetic for cauterization, curettement, etc., of corneal ulcers, cocain is inferior to holocain. The former dessicates the epithelium, may cause some exfoliation of the epithelial cells, and is not in the least antiseptic as is holocain. The latter does not have the dessicating effect, and the anesthesia is quite as lasting and complete.

The employment of the occlusive bandage and in carefully selected cases, the pressure bandage in corneal ulcers is of undoubted value. It protects the corneal surface from particles of dust which normally are removed by the action of the lids, but if there is any depression resulting from the ulcer, this is liable to be a receptacle for such foreign bodies, thereby delaying repair and favoring infection. The dry bandage is to be preferred to the moistened one, as it is more satisfactory in removing conjunctival secretions. Should there be an excessve purulent secretion, as in the corneal complications of ophthalmia neonatorum, the excessive secretion is a contraindication to the occlusion bandage, as it will retain the secretion within the conjunctival sac. In such conditions very frequent cleansings are of vital importance. Should the corneal ulcer be very deep and threaten perforation, this accident may be avoided by a carefully applied pressure bandage, the pad being very accurately arranged to make up for

the irregularity of the surface over and about the eye.

Argyrol and protargol to combat the complicating conjunctivitis are superior to nitrate of silver as formerly used, as the silver is liable to be deposited upon the surface of the ulcer, and is very irritating, while argyrol is not so in the least, but is antiseptic and stimulating. It is claimed that argyrol becomes somewhat inert after standing more than two weeks—it is certainly less irritating in fresh solutions. The stimulating and soothing effect of hot applications is of value, but must be used with caution. In my earlier practice, I am convinced that I used the hot compresses too much, interfering, as is claimed by some authorities, with corneal nutrition.

Should a case of corneal ulceration be complicated with obstruction of the lacrymal duct, this condition must receive energetic treatment, as secretion therefrom is usually infectious. When complicated with dacryocystitis energetic treatment of the latter condition must be employed. If acute, dilatation of the canal with a suitable probe, followed by irrigation with argyrol or protargol, is indicated—if profuse or chronic, extirpation or obliteration of the sac may be necessary. Dr. Casey Wood meets this condition satisfactorily, in emergency cases, by ligating the canaliculi. When stricture of the nasal duct is present, the employment of various disinfectants to the nasal mucous membrane is now more employed than formerly, and in my own practice I have met with cases where the use of some mild alkaline nasal douche has greatly favored the repair of corneal ulceration.

During the acute stages, comfort is greatly increased by the additional use of some mild, soothing ointment within the conjunctival sac and if repair is hastened later with a stimulating ointment, it does much to lessen corneal opacity. Stimulation by the insufflation of powdered calomel or iodoform is heartily praised by some authorities, but I have had little experience with it, believing that we have other methods of greater value.

Atropin is usually positively indicated both because of its specific effect on iritis and its value as a splint to the injured eye, putting it at rest. The danger of glaucoma must, however, be considered in patients above 50 years of age and in peripheral ulcers, or in any variety where there is unusual intraocular pressure, myotics may be of more value than mydriatics. I have under observation a patient whose treatment has required careful consideration of this condition; a man, 70 years of age, consulted me during the second week of corneal ulceration, complicated with symblepharon and chronic conjunctivitis, the result of long standing disease. Vision was limited to form perception, tention + ?, deep ciliary congestion and comparatively little pain, but what was present was nocturnal. Fearing glaucoma, I did not instill atropin until the third day, when on account of the contracted pupil, non responsive to light or accommodation, I instilled one drop of a 1 per cent solution. During the next 12 hours, the pain suffered was agonizing, and the possibiltiy of exciting a subacute glaucoma was forcibly impressed upon me. As what mydriasis there had been revealed numerous synechiæ, I concluded it was easier to combat glaucoma, uncomplicated with adhesions, and continued the atropin. After the liberal

employment of all analgesic measures at my command and the liberation of the synechiæ, the patient became quiet and rapidly improved. Had this case been glaucoma I would have had some excuse, for vision was impaired out of all proportion to the corneal trouble, and the contracted pupil and turbid media made ophthalmoscopic examination impossible. Had atropin not been used when it was almost complete, posterior synechiæ would have resulted with very tedious convalescence and probably a chronically painful inflamed eye. I know of no medical question requiring more careful consideration than these contradictory indications for a mydriatic or myotic, a mistake being disastrous in either event.

For the absorption of the cloudiness resulting from corneal ulceration, thiasionin has been proven by Suker, Melville Black and others to be of value, if Desimet's membrane is not involved. It is given in hypodermic injections or in 3-grain capsules, twice daily. This line of medication must be continued for several months before much benefit is derived, and owes its beneficial effect to increased leucocytosis.

In conclusion, I would say that corneal ulcers should be treated largely on surgical principles, keep the ulcers clean, the eye at rest with atropin, if infection is present sterilize with the galvanocautery, phenol, solution of cyanid of mercury, formaldehyde, tincture of idoin or such antiseptic as seems indicated. Stimulate repair with yellow oxid or iodoform ointment, hot boric acid compresses, dionin, etc., and protect the eye from further infection with the occlusion bandage, if there is only slight purulent discharge. The darkened room in the management of these cases is a relic of barbarism, depresses the patient, and has a tendency to impair his recuperative powers.

The successful oculist must ever bear in mind that the eye is but a part of a delicate organism, and to be successful must consider all physical conditions which might retard convalescence. If there be disease of the lacrymal apparatus or nasal mucous membrane, correct this by judicious probing and irrigation and antiseptic sprays and douches.

Hygiene, diet and systemic measures are of great importance. Struma, anemia and other dyscrasia must receive proper attention.

The Russian Red Cross.—John Van R. Hoff says that the Russian Red Cross has a great social standing. Its members embrace a great number of the people, from the royal family down. Its organization extends widely throughout the country. It has a large income and during the war it did most commendable work. For purposes of administration it is organized into four grand subdivisions. The regulations governing it apply as well to times of peace as to those of war. The specific objects of the society during active operations are as follows: To supply women nurses, and, if necessary, physicians to the military medical establishments; to supply medicines, surgical instruments and dressings, warm clothing, and so on. To furnish hospital stores, and delicate food not included in the supply table of the medical department. To assist in the evacuation of the invalids by supplementing the physicians, trained nurses, and orderlies on duty with railroad ambulances and boats, besides supplementing the regular supplies; to aid through the local organization the sick sent into the interior of the country, for which purpose it keeps a record of all hospitals and other medical institutions in the region, and if necessary, establishes mobile hospitals in which the sick are cared for at the cost of the government, the rate being fixed by the Minister of War. The writer concludes by warmly praising the work of this society.—*Medical Record*, May 19, 1906.

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JULY, 1906

Editorial

The Jackson Meeting was characterized by Unity, Peace and Concord. There has seldom been a session of the State Society at which good fellowship was more apparent than at Jackson. The local profession had left nothing to be desired in the way of arrangements. No detail was too small to be overlooked; none too large to be splendidly achieved. There was that cordiality about the reception tendered by the Jackson Society which at once made the visitors feel at home and the good feeling was noticeable throughout the session. The evening before the first meeting, there was an informal reception, on Wednesday evening a masterful address by Doctor Murphy of Chicago, followed by dancing, and on Thursday evening a most enjoyable and elaborate entertainment by the ladies of Jackson. Excellent music and a clever one-act play were features. Special entertainments for the visiting ladies included an automobile ride, a trip through the prison and a trolley ride to Wolf Lake.

The full proceedings of the Council, House of Delegates and General Session will be published next month.

At the close of a notable address on Education, Doctor Inglis recommended that a special Committee on Education be appointed to co-operate with the regular committee of the American Medical Association. Provision for this was later made by the House of Delegates.

Other standing committees were created for the study and prevention of tuberculosis and for the study of the conditions under which fraternal and lodge practice are done.

The Legislature not having been in session this year, the Committee on Legislation had little to report. The work of the National Legislative Council was reviewed by the Michigan member, Doctor Carrow, the facts being given concerning the pure food bill, the army reorganization bill, the fight against nostrums and the establishment of a Department of Health in the President's Cabinet.

Important resolutions were passed and referred to the Committee on Legislation and Public Policy, one denouncing the prevalence of criminal abortion and the other recommending that the laws of the state should be so modified as to encourage the more general application of the tuberculin test to cattle, by providing satisfactory compensation for the cattle destroyed. Another important resolution passed was that condemning the lowering of the fees for life insurance examinations.

Resolutions expressing the appreciation which the Society feels for the splendid work accomplished by its former President and former Chairman of the Council, Dr. Leartus Connor, were adopted. A special appropriation was made for and a committee appointed to provide a suitable token of appreciation for the retiring Secretary, Dr. A. P. Biddle.

Numerous but for the most part minor

changes were made in the By-laws, those of importance being in the section relating to the orations. A two-day session was decided upon. An appropriation of $500.00 was made for the physicians of San Francisco and vicinity.

The following officers were elected: President, Dr. C. B. Stockwell, Port Huron; Vice-Presidents—Dr. William Fuller, Grand Rapids; Dr. E. T. Abrams, Dollar Bay; Dr. D. E. Robinson, Jackson; Dr. A. R. Stealey, Charlotte.

The 1907 meeting will be held in May, at Saginaw.

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The Crusade against Tuberculosis has made such immense strides that the working man of today has more knowledge of its infectiousness and its prevention, than was possessed by the educated man of twenty or even ten years ago. The fight against the white plague is now world wide and every civilized country has associations whose object is the spreading of knowledge of methods of prevention and cure. This fight has been by no means in vain. In Prussia, the death rate has been reduced one-third, in the city of Stockholm it has been reduced 40 per cent, and in New York city 30 per cent.

In this fight, America has not lagged. There are now no less than fifty anti-tuberculosis associations among the laity in the United States, and at least five in Canada.

Michigan has not been as prominent in this work as she should have been. A good, if tardy, beginning has been made, but the work should be pushed in every county in the state. The stimulus for this work must come from the profession and should be under the control of a committee, in order that the work may be centralized. For this purpose, the following action was taken at Jackson:

Whereas, the study and prevention of tuberculosis is one of the greatest problems to be faced and solved largely through the agency of the medical profession, therefore,

Be it resolved, that a permanent committee, to be known as the Committee on the Study and Prevention of Tuberculosis be established by the Michigan State Medical Society, said committee to consist of five members to be appointed by the President of the Society. The duties of said committee shall be to report annually, and from time to time, through the columns of the State Medical Journal, on the year's progress along the lines of study, prevention, treatment and cure of tuberculosis, together with economic and sociologic aspects of the disease; to place this information before the county medical societies; to co-operate in every way possible with national, state and local societies and associations for the study and prevention of tuberculosis, and with all local, state and national Boards of Health, to secure the attainment of the same ends—the prevention, relief and cure of tuberculosis.

The names of the committee will be announced later. Every part of the State will be represented. When the members of the committee are announced and work is begun, every member of the State Society should give his hearty support in this important work.

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The Sum of Five Hundred Dollars from our treasury was appropriated at Jackson for the relief of the medical profession in and about San Francisco. This was immediately sent on through the American Medical Association.

The doctors out there need it. The fire swept away all of the office buildings in which many of the profession had their offices—books, records, instruments, furniture—all disappeared. In

addition, many also lost their homes. For the builder, the business man and the laborer there are work and money to pay for the work. For the professional man there is work, but for months, there will be little financial reward.

The first number of that excellent State Journal, the *California State Journal of Medicine,* which appeared after the calamity, is a pathetic little sheet, but it gives ample evidence of the spirit and virility of its editor. All its property has disappeared and as the editor says, the editorial office is under the editor's hat—the only covering he has left. But Doctor Jones' humor does not desert him. He says that the gentlemen who have threatened to sue the journal might now proceed and get a judgment on the pall of smoke which still hangs over what was once the property of the paper. The State Society was in session in San Francisco on the eventful day. Dr. Jones remarks that "this session will remain the one most generally remembered." We are glad to add our mite to help our transcontinental brothers get on their feet again.

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The Three Day Session of the Society was inaugurated at Grand Rapids in 1904 and carried out at Petoskey and at Jackson.

There are several objections to the three-day session, which experience has proven. Few members come at the beginning and remain throughout the session. The mornings, except for the president's address and the orations, are practically wasted, and much of the scientific part of the program—the most important part—comes toward the end of the day when every one is tired, especially when the weather is as hot as it was at Jackson. Then, too, it is a strain on the local profession to entertain for so long a period, although, be it said, there has been no outward evidence of this.

The Society hereafter will have a two-day session. The Council will meet in the afternoon, and the House of Delegates in the evening previous to the opening session. The first morning will be given up to the president's address and matters of general interest. Sections will be held in the afternoon of the first day and in the morning and afternoon of the second day. A short general meeting will take place at noon on the second day. The orations will be omitted.

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The Fees for Life Insurance Examination have been pretty thoroughly discussed in the medical journals during the past three months, so that the issues at stake are well understood by the profession. The reduction from $5.00 to a "graded system of fees," as it is termed by the companies, but which is virtually a flat $3.00 fee, was sprung on the examiners at a time when united dissention was impossible. Since then most of the State Societies have met and loud has been the protest thereof.

The matter was brought up at Jackson by the delegates from the Muskegon-Oceana and Washtenaw Societies, both of which have pledged their members not to accept the reduction.

The following resolutions were adopted:

Whereas, Many of the Life Insurance Companies have notified their medical examiners of

a reduction of the examining fee from $5.00 to $3.00 and

Whereas, We, as physicians, realizing the responsibility incident to proper examination of the individual, believe such reduction to be unjust, therefore, be it

Resolved; That the House of Delegates, in session assembled, does hereby declare such reduction to be unjust, and respectfully requests that no physician legally authorized to practice medicine in Michigan, accept such reduction of fees.

Resolved, That it is the sense of the House of Delegates that hereafter in such examinations for life insurance, the minimum fee shall be $5.00.

Resolved, That the several component societies forming this State Society, be requested to adopt these resolutions.

Resolved, That a copy of these resolutions be mailed to the several life insurance companies that have reduced the fee from $5.00 to $3.00.

At Boston a committee of five was appointed to consider all the questions of insurance matters and their adjudication, in order that the rights and dignity of the profession may be maintained.

♣ ♣ ♣

The Boston meeting of the American Medical Association was the largest ever held. The exact registration figures are not at hand at this writing, but it is probable that over four thousand, five hundred members were in attendance.

The meeting was notable in several respects. More distinguished members of the profession from abroad were present than ever before—among them, Dührrsen, von Rosthorn, Trendelenburg and von Frey from Germany, Fenwick and Ballance from England. The clinical and pathological exhibits, placed in the new Harvard Medical School building, were extensive and interesting beyond precedent. The Sections were successful, in point of the excellence of the papers and discussions as well as in point of attendance, as never before. Another notable feature was the co-operation of the members from New York State, who have been so long without the fold, on account of the unfortunate dissention in that state, now happily settled.

The new President of the Association is Dr. Joseph D. Bryant of New York and the next session will be held at Atlantic City.

Each year it is more apparent that none of us can afford to miss the annual meeting of the Association.

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At the Jackson meeting there seemed to be some confusion as to whom certain matters relating to State and National Legislation should be referred. All such business should be submitted to the Michigan member of the National Legislative Committee of the A. M. A. (Dr. Flemming Carrow, Detroit). He will in turn submit it to the Auxiliary Legislative Committee, composed of one member from each County Society, and they will see that it is brought before our State or National Legislators, as the case may require. A report of the year's work is presented to the State meeting at its first general session each year. Let it therefore be understood that all medical matters requiring State or National Legislation will have proper consideration if presented through the usual channel, that is, to Dr. Flemming Carrow of Detroit, Michigan member of the National Legislative Council, or to any of the following members of the

National Auxiliary Congressional and Legislative Committee for Michigan.

Alpena	A. J. Wilkinson	Alpena
Barry	G. W. Lowry	Hastings
Bay	A. W. Herrick	Bay City
Benzie	C. P. Doyle	Frankfort
Berrien	Orville Curtis	Buchanan
Branch	Samuel Schultz	Coldwater
Calhoun	L. S. Joy	Marshall
Cass	James Baird	Dowagiac
Charlevoix	L. M. Kanagy	Charlevoix
Cheboygan	Chs. B. Tweedale	Cheboygan
Chippewa	John R. Bailey	Mackinaw Island
Clinton	M. Weller	St. Johns
Delta	H. M. Long	Escanaba
Dickinson and Iron	Wm. H. Vernboer	Norway
Eaton	P. L. Thompson	Grand Ledge
Emmet	J. E. Reycroft	Petoskey
Genesee	H. R. Niles	Flint
Gogebic	J. C. Yates	Ironwood
Gd. Traverse-Antrim	Howard B. Garner	Traverse City
Gratoit	G. S. Browning	Alma
Hillsdale	Burt F. Green	Hillsdale
Houghton	A. B. Simonson	Calumet
Huron	D. J. McColl	Elkton
Ingham	L. Anna Ballard	Lansing
Ionia	F. W. Bradley	Saranac
Isabella	P. E. Hichmond	Mt. Pleasant
Jackson	Chas. S. Lewis	Jackson
Kalamazoo	O. H. Clark	Kalamazoo
Kent	F. J. Lee	Grand Rapids
Lapeer	H. E. Randall	Lapeer
Lenawee	D. L. Treat	Adrian
Livingston	R. H. Baird	Howell
Macomb	J. M. Croman	Mt. Clemens
Manistee	W. K. Branch	Manistee
Marquette and Alger	H. J. Hornbogen	Marquette
Mason	W. H. Taylor	Ludington
Mecosta	A. A. Spoor	Big Rapids
Menominee	P. J. Noer	Menominee
Monroe	Geo. F. Heath	Monroe
Muskegon	J. F. Denslow	Muskegon
Newaygo	F. H. Brown	Newaygo
Oakland	William McCarroll	Pontiac
O., M., C., O., R., O.	S. N. Insley	Grayling
Osceola	E. S. Richardson	Reed City
Ottawa	Henry Kremers	Holland
Saginaw	H. B. Howe	Saginaw
Sanilac	G. S. Tweedie	Sandusky
Schoolcraft	E. B. Patterson	Manistique
Shiawassee	A. M. Hume	Owosso
St. Clair	C. B. Stockwell	Port Huron
St, Joseph	L. K. Stote	Constantine
Tuscola	W. C. Garvin	Millington
	N. A. Williams	Bangor
Washtenaw	D. M. Cowie	Ann Arbor
Wayne	E. S. Sherrill	Detroit

We regret to announce the resignation from the Journal staff of Dr. H. S. Olney who has been connected with the editorial department, first conducting the department on pathology and bacteriology and later that on internal medicine. Doctor Olney has left Detroit and will reside in Pueblo, Colorado. Hereafter, the department of medicine will be conducted by Dr. T. B. Cooley.

Book Notices

Diseases of the Nervous System Resulting from Accident and Injury.—By Pearce Bailey, A. M., M. D., Clinical Lecturer in Neurology, Columbia University, New York City; Consulting Neurologist to the Roosevelt, St. Luke's and Manhattan State Hospitals, etc. Cloth; 627 pages. D. Appleton & Company, New York, 1906.

This is a slightly different title from that of the first edition of this work by Dr. Pearce Bailey, of New York, who has so thoroughly revised the former work that this title was thought the more correct one.

There is no more fertile field for the malingerer to experiment in than that of nervous diseases alleged to be due to injury, and while the ignorance which commonly underlies their brazen claim is not infrequently their own undoing, yet it is remarkable how shrewd and persistent some of these pretenders are in their efforts to mulct corporations.

There are, of course, many nervous lesions actually the result of bona fide injuries and a work treating definitely and authoritatively of those lesions, which may have their cause in traumatism, is especially valuable to those having frequently to do with medico-legal questions as well as to the surgeon and the neurologist. Such a book is this one from the pen of Dr. Bailey, who speaks from large experience.

He first takes up the general consideration of the case, e. g. the previous history of the patient, the history of the accident, the physical evidences of predisposition to nervous diseases and then the examination for the actual injury.

This section is followed by a discussion of the organic effects of injury to the nervous system, the functional effects of injury, and medico-legal considerations, laying more emphasis upon the

remote than upon the immediate effects of injury.

Altogether the work is very readable, and a valuable addition to any library. Paper, print and binding are excellent as is uniformly the case with books from the publishers, D. Appleton & Co.

Gynaecological Diagnosis.—A Manual for Students and Practitioners. By Arthur E. Giles, F. R. C. P., Surgeon to the Chelsea Hospital for Women, etc. 5½x8½ inches; 212 pages, with 35 original illustrations. William Wood & Company, New York. 1906.

There is perhaps no field in general medicine, in which the recent graduate finds himself more illy prepared—so far as diagnosis is concerned—than that of gynecology. Most patients suffering from the usual medical and surgical ailments can be examined by a dozen or more students, but the gynecologic patient can furnish material for but two or three. A physician, in most cases, must get his experience in this line from practice and not found his practice upon experience. For these reasons, books on the subject are particularly useful, and for its size, this of Giles' is as good as any of which we know. In it, there is no attempt at the finer distinctions which interest the gynecologist and no desire to present the subject from a pathologic view point. The diagnosis is carried only up to the point to which the practitioner may be expected to go.

In most treatises on gynecology, the order is this: Given a disease, what are its symptoms? In this book, the order is reversed and after chapters devoted to general considerations, leading symptoms are taken up *seriatim*, sub headings giving asociated symptoms. Adding to these facts, those obtained by examination, the diagnosis is finally arrived at. After complete consideration of each symptom, tables give the facts and systematize the information for ready reference.

While such a method may lead to errors, it will more frequently than not, lead to a correct diagnosis. The book contains too many facts crowded into a short space to make easy reading, but it is intended as a ready reference book and as such can be recommended.

Perjury for Pay.—An expose of the methods and criminal cunning of the modern malingerer. By Willis P. King, M. D., ex-Assistant Chief Surgeon of the Missouri Pacific Railway System. 5½x8½ inches; 312 pages. Cloth, $2.00. The Burton Company, Kansas City. 1906.

In this little book, the author has collected many of the more interesting cases of malingering which have come to his notice, during years of experience as a railroad surgeon. Suits for injury which are really based upon justifiable grounds are, according to Dr. King, much in the minority—in fact, he dedicates the book "to those rare individuals, the honest litigants in personal injury litigation—the men and women who do not want something for nothing."

In the course of the chapters, which are divided according to the seat of the supposed injury, the author goes on to show that the prejudice against corporations which is so widespread, influences juries to such an extent, that justice is rarely done and settlements are made, almost without exception, out of all proportion to the injuries received.

While the book is not noteworthy as a literary production, it is interesting alike to the physician, lawyer and lay reader. The breezy style makes good reading for warm weather and there is enough instruction to be gained, to make the reading worth while.

Infection, Immunity and Serum Therapy.—By H. T. Ricketts, M. D., Instructor in Pathology, University of Chicago. 5½x7½ inches; 599 pages. American Medical Association Press, Chicago. 1906.

No subject is more difficult to grasp than that of immunity and for one who graduated before the subject was systematically taught, it seems almost a hopeless task to inform himself on this, the most important theme of recent years. Much that is new is not yet in text books, and much of it is to be found in special journals often quite inaccessible to the general reader.

Realizing these facts, the editor of the *Journal of the American Medical Association* published each week, during 1905, a short installment of a continued and systematic article by Ricketts.

The whole has now been revised and brought up to date, forming the most important and best resume for the general medical reader which has appeared. It has been fully indexed. A mastery of this book will leave one well informed on a subject destined more and more to control medical thought and literature. Those who read and appreciated the installments which appeared, will appreciate the finished, revised and indexed work; those who missed some of the numbers and did not find time to study carefully the others, will doubly appreciate Dr. Ricketts' work, now that it is complete. No one can afford not to possess the book, and possessing it, to study it carefully.

A Primer of Psychology and Mental Disease.—For use in Training Schools for Attendants and Nurses and in medical classes, and as a Ready Reference for the Practitioner. By C. B. Burr, M. D., Medical Director of Oak Grove Hospital

(Flint, Mich.) for Mental and Nervous Diseases; formerly Medical Superintendent of the Eastern Michigan Asylum. Third Edition. Thoroughly revised, with illustrations. Pages viii-183, 12mo. Bound in extra vellum cloth, $1.25 net. F. A. Davis Company, Philadelphia.

This little book which greets us in a third edition has served its purpose well and this last very thorough revision, increased in size by nearly 70 pages, will only add to its popularity.

Doctor Burr has thoroughly revised and amplified Part 1, that treating of elementary psychology, and has practically rewritten the whole of Part 2, which treats of Insanity. The former classification of mental diseases gives way here to that of Kraeplin, as adapted by Diffendorf. Considerable is added here and altogether this section will be found much more satisfactory than that of the former edition.

Parts 3 and 4 treat of the management of cases from the medical and the nursing standpoints respectively.

This work admirably meets its original intent, viz., that of a text book for training schools for attendants; and it is now even a more valuable and convenient book for the practitioner and student.

A Treatise on Surgery.—In two volumes. By George R. Fowler, M. D., Examiner in Surgery, Board of Medical Examiners of the Regents of the University of the State of New York, etc. Two imperial octavos of 725 pages each, with 888 text illustrations and 4 colored plates, all original. Philadelphia and London: W. B. Saunders & Company, 1906. Per set: Cloth, $15.00 net; half morocco, $17.00 net.

The second volume of this new work on surgery is at hand. In it, the special surgery of the different regions of the body is taken up in order, and the matter of diagnosis, differential diagnosis and treatment set forth in such a brief, yet comprehensive way, that much ground is covered in a comparatively small space.

Surgery has grown into such an immense subject that it is every day becoming an increasingly difficult task to present such essentials as are necessary for the student and desirable for the practitioner, in a satisfactory manner, without running into several volumes and thus defeating the object of the author. This, Fowler has succeeded in avoiding in a very happy manner.

It may be truly said that this work is a distinct addition to the teaching armamentarium, for it can be safely recommended to the senior student.

The text is exceedingly well edited and elucidated at every step with excellent and well chosen illustrations.

Books Received.

Perjury for Pay. By Willis P. King, M. D. The Burton Company, Kansas City.

Infection, Immunity and Serum Therapy. By H. T. Ricketts, M. D. Press of the American Medical Association, Chicago.

Gynaecological Diagnosis. By Arthur E. Giles F. R. C. P. William Wood and Company, New York.

Transactions of the College of Physicians of Philadelphia. Printed by the College.

Consumption and Civilization. By John B. Huber, M. D. J. B. Lippincott Co., Philadelphia. (Notice next month.)

Bovee's Gynecology. Edited by J. Wesley Bovee, assisted by J. Riddle Goffe, G. Brown Miller, George H. Noble, Benjamin R. Schenck, Thos. J. Watkins and X. O. Werder. Octavo; 838 pages, 382 engravings and 60 full page photos in colors. Cloth $6.00 net. Lea Brothers & Co., Philadelphia, 1906. (Notice next month.)

A Treatise on Surgery. By George R. Fowler, M. D. Vol. II. W. B. Saunders Company, Philadelphia.

Transactions of the American Medico-Psychological Association—1905. Published by the Association.

Report of the State Board of Health of Pennsylvania, 1904-05. Published by the Board.

Surgical Pathology and Treatment of Diseases of the Ear. By Clarence J. Blake, Professor in Harvard University, and Henry O. Reik, Associate in Johns Hopkins University. Price $3.50. D. Appleton & Co., New York. (Notice next month.)

Human Sexuality. By J. Richardson Parke, Late Acting Assistant Surgeon, U. S. A. Professional Publishing Co., Philadelphia.

Post-operative hemorrhage from the base of the bladder that proves inaccessible to ligatures, and uncontrollable by packings, may be checked by the following method: Through several thicknesses of gauze, cut in square, pass a double strand of heavy silk or of twine fastened on a stout needle. With the patient in Trendelenburg's position and the bladder widely opened, thrust the needle from within directly through the perineum, and bring the gauze firmly against the bleeding surface by pulling upon the threads, which are then to be fastened to an outside dressing.

County Society News.

OTTAWA.

A regular meeting of the Ottawa County Medical Society was held at Holland, April 10, 1906, with the President, Dr. B. B. Godfrey, in the chair. The following program was given:

Case—Report—**"Quinsy Followed by Mupltiple Neuritis"**—G. H. Thomas, Holland.

Case—Report—**"Pharyngeal Spasm Caused by an Old Tonsillar Crypt"**—A. Leenhouts, Holland.

Paper—The **"Feeding of the Baby"**— J. F. Peppler, Graafschap.

Paper—**"Mult ple Neuritis"**—F. D. Smith, Coopersville, Mich.

Paper—**"The Clinical Examination of the Blood"**—A T. Godfrey, Holland.

A committee was appointed to arrange for a special meeting to be held for the purpose of discussing the financial conditions of practice, schedules of fees, etc.

A committee was appointed to draw up resolutions endorsing the work of the *Journal of the American Medical Association* against proprietary medicine and nostrum prescribing.

It was decided, upon vote of the members present, to hold meetings hereafter every two months instead of every three months.

E. D. KREMERS, Sec'y.

WAYNE.

General Meeting April 2, 1906. **Dr. J. L. Polozker** presented a paper: **"Infantile Troubles Due to Improper Feeding, Especially During the Summer Months."** The best preventive of diarrheal diseases in infants is clean breast feeding by a mother who has suitable breast milk. The next best preventive is laboratory milk suitably prescribed according to the changing needs of the infant. Third best is home modification of clean cow's milk, but this home modification is seldom carried out correctly without help by a competent nurse. The treatment of diarrheal disease already developed in an infant under one year is, during the first 24 hours, the withdrawal of all food, castor oil two to four teaspoonfuls, and frequent, small quantities of boiled water; second 24 hours, a little whiskey water, teaspoonful to pint, or a little barley or rice water, ounce to pint, strained; third day, gradual return to breast feeding, if breast-fed, any defect in the mother's milk that has been found upon examination having been corrected; if bottle-fed, return to laboratory milk of half the amount and half the strength that the infant could take in health.

"My experience in the clinic with laboratory milk has proved to me that the laboratory milk gives the best results. When, in the past, they were rapidly dying, home modification of cow's milk made no improvement because of the failure of the mother to carry out our instructions as to modification and cleanliness at home. The last summer, with prescription feeding, and above all by careful attention to details, we had only two deaths to report in the hundred cases. Walker-Gorden milk, properly prescribed by the attending physician, the case being watched carefully as to the digestion of the child from day to day so as to notice the necessity for changing the prescription to a higher or lower percentage of the ingredients, as the case may be, is the only proper feeding when artificial feeding is to be resorted to. Some physicians think this artificial feeding is a fad only for sick children, but it provides food for all cases where the infant cannot get the mother's milk, or when the mother's milk is not sufficiently sustaining."

Dr. C. G. Jennings: Home modification in actual practice is usually unsatisfactory because at first the mother is not expert enough and when she has had experience enough to be well trained, the need for modification is mostly past. With the aid of the laboratory, modification is from the first made correctly as ordered, and in the majority of cases is readily satisfactory. It is to be said, however, that in certain instances there seems to be no modification even by the laboratory that is suitable. For instance, there were twins, very much alike apparently in all respects; one was readily nourished by ordinary laboratory modification; the other no modification could be devised to agree with.

Dr. P. M. Campbell: "By their stools ye shall know them." Careful routine observation of the stools will enable one to anticipate pronounced digestive disturbance and apply prophylactic measures.

Dr. Charles Douglas: The ability of an infant to digest fat decreases in the first few months, while the ability to digest proteid increases. Certain infants cannot digest more fat than the small amount which cannot be removed from the milk.

Dr. D. S. Walmsley presented a paper: **"Looking Backward."** (This paper appears in the current issue of the Journal.)

Meeting of the Medical Section, April 9. **Dr. E. S. Sherrill** presented the paper: **"How May the Medical Profession Best Co-operate to**

Reap the Greatest Benefit in Connection With the Passage by Congress of the Pure Food and Drug Bill?"

I. Extracts from Pure Food and Drug bill as reported with amendments, committeed to the Committee of the Whole House on the State of the Union, and ordered printed March 7, 1906.

Object of law is to prevent the sale of articles of food or drugs which are adulterated or misbranded. Penalty $200 for first offense, $300 upon conviction for each subsequent offense or not to exceed one year imprisonment, or both at direction of court.

Term "drug" shall include all medicine and preparation recognized in the U. S. P. and N. F. for internal and external use and any substance or mixture intended to be used for the cure, mitigation or prevention of disease of either man or animals.

A drug shall be deemed "adulterated" when sold under the standard of strength, quality or purity recognized in the U. S. P. or N. F. or any other professed standard.

A drug shall be deemed to be adulterated if it is an imitation of or offered for sale under the name of another article, or if the contents of the original package shall have been removed in whole or in part and other contents shall have been placed in such package, or if it fail to have a statement of the quality or proportion of any alcohol therein or of any opium, cocaine or other poisonous substance which may be contained therein.

2. Statements of Dr. Reed, of Cincinnati, Chaiman of American Medical Association Committee on Medical Legislation, "Manufacturing establishments, some of them enjoying a high grade of commercial respectability, openly acknowledge that they manufacture pharmaceutical preparations of varying degrees of purity." This statement not readily substantiated.

3. Attitude towards proprietaries. Definition. *Nostrum,* a medicine, the ingredients of which are kept secret for the purpose of restricting the profits of same to the inventor or proprietor. *Patented Medicine,* a medicine on which a patent has been granted by the government. *Trade-marked* or *copy-righted articles,* those the names of which are owned and controlled by some one. *Trade-marked articles,* those whose names are protected as a trade mark, as applied to pharmaceuticals not susceptible of definition acceptable to all. *Proprietary,* a preparation which belongs to some one. Patented medicines and copyrighted medicines are both proprietary. *Patent Medicines* should refer only to patented medicines. Really refers most commonly to secret, copyrighted or trade-marked articles advertised to the public.

a. Physicians should avail themselves of the provisions of the bill, secure uniform quality of all U. S. P. preparations.

b. The profession should consent to the proprietorship of new medicines.

c. The profession should under no circumstances use secret proprietaries advertised to the general public.

d. The profession should not use secret proprietaries even though advertised only to them. We should claim the right to know the ingredients, the dosage, and physiological effect of any preparation prescribed by us.

e. We should use proprietaries whose composition is made known to us and which are not advertised to the public.

f. We should not use proprietaries whose composition is made known to us, when they are advertised to the public.

4. Suggestion for a Council on Therapy. Members should be skilled clinicians who would test the therapeutic value of every remedy and report formally its findings.

5. Additional suggestions:

a. Medical schools should give more detailed study to Materia Medica and Therapeutics.

b. Physicians and pharmacists should confer more frequently.

c. Physicians in their societies should give more detailed statements concerning the use of drugs. It is more important to be told how to use a drug than it is to be told simply to use the drug. (Author's abstract.)

Dr. F. L. Newman was elected chairman and Dr. W. J. Wilson, Jr., secretary of the section for 1906-1907.

Meeting of Surgical Section, April 23. **Dr. W. F. Metcalf** presented a paper: **"Prognosis, Immediate and Remote, in the Treatment of Chronic Inflammatory Conditions of the Pelvic Organs by Hysterectomy."**

Dr. O. S. Armstrong commended the accurate tabulation of cases as a means of study.

Dr. Max Ball'n: Radical treatment in these cases is effective, but in many instances of women who are still sexually active, less radical treatment that does not induce an artificial menopause, although less effective for cure, is to be preferred.

Dr. Metcalf: Hysterectomy before the menopause is to be recommended for inflammatory conditions only in the severe cases. The idea is to make the patient well with the least possible mutilation.

Dr. J. W. Vaughan presented a paper: **"The Cystoscope as a Diagnostic Aid."**

Dr. F. W. Robbins said that in certain cases the older Kelly cystoscope was preferable.

Dr. D. M. Campbell was elected chairman of the section and **Dr. W. E. Blodgett** was elected secretary, for 1906-1907.

General Meeting, April 30. **Dr. W. S. Anderson** *presented* a paper: **"The Speaking and Singing Voice as Affected by Abnormal Conditions of the Nose and Thoat."**

This paper deals first with the physiology of the voice, and draws attention to the importance of the chest, trachea, larynx, pharynx, nose and accessory sinuses as resonators of the voice. In the production of articulate speech the sound produced in the larynx is moulded by the lips, tongue, teeth, soft palate and the muscles of the pharyngeal and buccal cavities. The individual character of the voice is due largely to the resonators. In order to have a clear resonant voice it is necessary that the nose and nasopharynx be free, and that the muscles controlling the pharyngeal and buccal cavities perform their functions normally.

The author considers the conditions which affect the voice in the following order: First, abnormal conditions of the nose and sinuses; second, the nasopharynx; and third, the pharynx. Special attention is drawn to the importance of moderate degrees of nasal obstruction. Catarrh of the throat, as understood by the laity, is usually due, or aggravated at least, by improper nasal breathing. A comparatively small amount of interference to the passage of air through the upper portion of the nose, or nasopharynx, will necessitate more or less mouth breathing, which often leads to pathologic changes in the pharynx, larynx and bronchi. Persons with narrow nasal passages are subject to frequent colds, and their voices are easily affected by changes in the temperature and humidity of the air. Mention is also made of the influence upon the voice of adenoids, cleft palate and the various form of paralyses. Special attention is drawn to the effect of hypertrophy of the tonsils. The treatment advocated is the restoration of the nose and throat to as near a normal condition as possible. (Author's abstract.)

Dr. W. A. Spitzley: The faucial tonsils are the only likely obstructions to the voice in the throat, and lesions of the vocal cords, except acute inflammations, are rare; therefore the cause for impairment of voice production is to be looked for in the nose.

Dr. H. J. Hartz: Jean de Reszke sang years with an obstruction in his nose; upon removal of this in New York, his voice was much improved.

Dr. Anderson, in reply to a question, said that tobacco usually produced a transient congestion and disturbance. Alcohol is injurious to the voice, although there are a few famous singers who drink immoderately.

Dr. H. J. Hartz presented a paper: **"The Pathology of Tuberculosis."**

Dr. W. E. Blodgett referred to the common experience of having a chronic or apparently healed tuberculosis of a joint made acute again by an accidental or operative trauma. On this account, it is usually wise in a fairly advanced process to avoid forcible correction of the deformity, and to resort to a corrective osteotomy near the joint. In order to determine whether the lighting up of an apparently cured tuberculous joint is due to infectious material encapsulted within the old lesion, or to infection from some other focus in the body outside the joint—and all patients with joint tuberculosis have other tuberculous foci—the speaker had in two instances planted in guinea-pigs suspicious material obtained during operations from old, apparently cured tuberculous joints. Both results were negative. The work is to be continued.

Dr. W .A. Spitzley: Those cases of tuberculous peritonitis in which the peritoneum is thickly studded with small gray tubercles, and in which there is a large effusion, thus showing greater peritoneal reaction, are the cases that give the best operative results. Cases with large yellow tubercles, great matting of the intestines, and small effusion, do not give good results.

Dr. Hartz, in reply to a question, said that mercury might be beneficial as a germicide to the tubercle bacilli, but that it might also be harmful in softening nature's protective walls of lymphocytes.

General meeting, May 7. A symposium on criminal abortion was held. **Dr. H. W. Longyear** delivered an address: **"The Medical and Surgical Aspects of Criminal Abortion." Clarence A. Lightner,** M. A., delivered an address: **"The Law in Relation to Criminal Abortion."**

Rev. Fr. John Richard Command, Trenton, delivered an address: **"The Attitude of the Church Toward Criminal Abortion."**

Meeting of Surgical Section, May 14. After a dinner given by the Society in his honor, **Dr. Howard A. Kelly,** Baltimore, delivered an address, with lantern slide demonstrations, entitled: **"A Concensus of My Recent Experience in Renal and Ureteral Surgery."**

General meeting, May 21. The annual reports were made. The following officers were elected: President, Dr. J. H. Carstens; vice-president, Dr. W. F. Metcalf; secretary-treasurer, Dr. W. D. Ford; directors, Dr. G. W. Wagner, Dr. H. W. Yates, Dr. L. J. Hirschman, Dr. G. L. Kiefer and Dr. F. B. Tibbals.

Meeting of the Medical Section, May 28. **Dr. C. T. McClintock** and **Dr. W E. King** presented the paper: **"The Oral Administration of Antitoxins for the Prevention of Diphtheria, Tetanus and possibly Sepsis, with some Observations on the Influence of Certain Drugs in Preventing Digestion and Promoting Absorption from the Alimentary Canal."**

Dr. T. B. Cooley said that a considerable part of the cost of diphtheria antitoxin as prepared for subcutaneous injection was the unnecessary variety of amounts in which it was put up. Besides adding to variety of containers, this increases the total amount kept in stock by the retailer, and hence increases the return of deteriorated serum.

Dr. H. W. Longyear: The increased ease and safety of oral administration and the reduced expense will make oral administration of antitoxin especially adapted to prophylaxis.

Dr. W. L. Wilson, Jr., said that he had given antitoxin orally to three exposed children; culture from one of these later showed diphtheria bacilli, although there was clinically no diphtheria.

Dr. Delos Parker: The fact that the period of immunity, 6 or 7 weeks, after oral administration of antitoxin, is the same as after hypodermic use, shows that the antitoxin is not much altered in absorption from gastro-enteric tract.

Dr. Leartus Connor commended the commercial house that had made possible the research reported in the paper.

WILLIAM E. BLODGETT, M. D.

Correspondence.

Chicago, May 29, 1906.

Dr. Benjamin R. Schenck,
Detroit, Mich:

Dear Doctor—Your letter of May 26th is received. I desire to express to you, and through you, to the Michigan State Medical Society, my appreciation of being elected an honorary member of your Society. This is indeed an honor, and I place myself at the service of the Society.

Very truly yours,

J. B. MURPHY.

Fort Huron, Mich., May 18, 1906.

Editor of Journal:

On May 16th I attended a meeting of the Huron County Medical Society and the opening of the new Memorial Hospital at Bad Axe. This is a free gift of Mr. F. W. Hubbard to the people of Huron County, erected in memory of his father, Mr. Langdon Hubbard. It is a gem of which Bad Axe and Huron County may well be proud. It is designed not only on correct hospital lines, but is artistic achitecturally, beautifully decorated in chaste style and thoroughly attractive. The different rooms have been furnished by various churches and individuals, and one lady furnishes the operating room. When in operation, with its staff of capable surgeons and physicians and its trained nurses, it will offer as convenient, efficient and desirable a means for the relief of human suffering as exists anywhere in the State.

Any community which numbers among its citizens one or more men like Mr. Hubbard could enjoy like privileges. Many communities have men of as great or greater wealth than he, but unfortunately, few are actuated by the generous and all embracing spirit of charity that moved him to this noble work. Men spend untold thousands to rear monuments for their worn out and soon to be forgotten bodies, as if such should be able to stay the current of time that bears their memories on to sure oblivion: whereas if they would do such good deeds as Mr. Hubbard has done, in thus denying themselves for the good of their fellow-men, they would raise monuments that would insure not only lasting but loving remembrance.

I most heartily congratulate the people and profession of Bad Axe and their county.

MORTIMER WILLSON,
Councillor.

Relief Committee of Physicians of San Francisco

Lane Hospital.

June 12th, 1906.

To the Secretary,
Michigan State Medical Society,
Detroit, Mich.

Dear Doctor:—On behalf of the Relief Committee of Physicians, I beg to extend thanks to you and your colleagues for the generous remembrance for our afflicted brethren. May I ask you to make known to members of your society our sincere appreciation and gratitude for their donation?

Wtih assurances of my esteem, I remain,

Very truly yours,
FRED. W. LUX, M. D.,
Secretary.

San Francisco, June 11, 1906.

Dr. B. R. Schenck,
Sec'y Michigan State Medical Society,
Detroit, Mich.:

My Dear Doctor:—Your favor of May 28th, stating that the sum of five hundred dollars had been sent to the physicians of this vicinity through the American Medical Association, has just been received, owing to many postoffice delays. The letter will be officially acknowledged by our secretary, but I wish to personally express our appreciation for what the profession of Michigan has done for us.

We have been overwhelmed with kindness and the response of physicians from all parts of the United States to our appeals for aid was immediate. By actual count, the offices of 910 registered physicians were burned, so you can understand our necessities to some extent.

In most instances, the loss of practice has been the blow which hurts most, for it will be many months before many men can earn a living.

With many thanks, believe me,

Most sincerely yours,
WALLACE I. TERRY,
President San Francisco Medical Society.

Michigan Personals

Dr. O. C. Breitenbach has been re-appointed Health Officer, and Dr. M. P. Fenelon, City Physician, of Escanaba.

Dr. J. B. Griswold, of Grand Rapids, has resigned from the state board of registration, and Dr. T. A. Felch, of Ishpeming, Councilor of the Twelfth District, has been appointed by Governor Warner to fill the vacancy.

Dr. S. F. McKay has located at Orion.

Born to Dr. and Mrs. G. M. Livingston, of Manistique, on May 9th, a son.

Dr. C. D. Aaron and Dr. G. S. Field, both of Detroit, are in Europe.

Dr. H. W. Enders is the new city health officer of Eaton Rapids.

Dr. and Mrs. C. H. Inch, of the Kalamazoo Asylum staff, are in Europe.

Dr. J. C. Kenning, formerly house physician at the Children's Free Hospital, Detroit, has located in Grand Rapids.

Dr. W. G. Hutchinson, Dr. E. C. Lee and Dr. G. H. Palmerlee, all of Detroit, have been commissioned assistant surgeons in the National Guard of Michigan.

Dr. W. A. Hackett, of Detroit, and Miss Adele Hagemeister were married June 14th.

Dr. Hal C. Wyman and Miss Lulu Weeks were married June 12th at Mount Vernon, N. Y.

Dr. J. F. Muson, late assistant in hygiene at the University of Michigan, has been appointed pathologist at the Craig Colony for Epileptics.

Re-appointments made by the Wayne County Superintendents of the Poor at Eloise are: General superintendent, Dr. John J. Marker; assistant, Dr. W. B. James; house physician, Dr. H. S. Earl.

Dr. C. J. Sorsen, of Calumet, has gone to Europe.

Dr. J. L. Ambrose has been appointed city physician of Bay City.

Dr. L. M. Cary, Novesta, and Miss Lulu Hall, Bad Axe, were married May 12th.

Deaths

Dr. F. R. Hodgson, of Rives, died at the city hospital in Jackson June 2nd.

Dr. E. J. Covey, formerly a practitioner of Flint, died at Durand on April 23rd.

Dr. G. R. Breckon, of Caledonia, died May 5th, at the U. B. A. Hospital, Grand Rapids, of cancer of the stomach.

Dr. Albert Wilton, who formerly resided at Flat Rock, but for the past three years an army surgeon, died in Washington, May 23rd. Dr. Wilton was a graduate of the Detroit College of Medicine in 1900.

Progress of Medical Science

MEDICINE.

Conducted by

H. S. OLNEY, M. D.

Sanitary Supervision of Tuberculosis and Other Communicable Diseases by the Department of Health of New York.—BILLINGS gives the general procedure which the Department of Health follows in its sanitary supervision of the diseases mentioned. All cases of pulmonary tuberculosis, typhoid fever, and cerebrospinal meningitis are registered at the Department of Health, and all necessary steps are taken to render that registration as accurate and complete as possible. Every person (or the family of such persons) suffering from these diseases is furnished instructions as to the measures to be taken to prevent its extension. Bedding, and so on, used by persons suffering from these diseases is disinfected. All premises which have been occupied by persons suffering from pulmonary tuberculosis or cerebrospinal meningitis, on death, removal, or recovery of the patient, are disinfected with formaldehyde, or renovation is ordered. Charitable assistance or hospital care is provided so far as is possible for all persons wishing or requiring it. The general public is educated as to the nature of the above diseases, the precautions to be taken against their spread, the advisability of institution and sanatorium treatment, and so on. Patients suffering from pulmonary tuberculosis, with no attending physician, are visited at their homes by nurses and given necessary assistance and advice, are provided with extra diet (milk and eggs) when necessary, and are given free medical treatment in the department clinics. Information as to the probable source of infection (water, milk, oysters) is obtained in every case of typhoid fever, and suitable action is taken. In cases of cerebrospinal meningitis quarantine of patients at their homes is enforced and other children in the family are excluded from school. Malarial fever, abortion, puerperal fever, septicemia, erysipelas, and pneumonia are reportable diseases, but at present the patients are not visited.—*Medical Record,* May 19, 1906.

Fatigue.—LEE reviews the known facts and the theories regarding the phenomena of fatigue; showing that although physiologists are generally in agreement as to the facts of muscle fatigue so far as demonstrated, and it is pretty certain that the peripheral nerve fibers are themselves exceedingly resistant, the question of the susceptibility of the nerve centers to fatigue is still considerably in dispute. In view of the recent results of Sherrington, Joteyko, Story and others, LEE is inclined to think that the muscular system tires before the nerve centers, and that the latter are, like the peripheral nerves, resistant to fatigue. They also throw a certain measure of doubt, he says, on all supposed proofs of central fatigue. A physiologic explanation of the facts of mental fatigue is not possible, he says, in the present state of research. We can not deny the fact of fatigue of psychic centers, but we can only speak with caution as to its being of central or peripheral origin. As yet we know too little in regard to the chemical changes attending fatigue. LEE'S own experiments make it seem probable that a loss of carbohydrate has considerable part in the production of muscular fatigue, and he has also experimented with three metabolic products generally recognized as fatigue substances, sarcolactic acid, mono-potassium phosphate and carbon dioxid, and finds that these exercise a toxic depressant action, especially on the muscular system, and that the sensation of fatigue is in large part the psychic manifestation of this depression. Other like fatigue substances will probably be discovered, and Weichardt's alleged discovery of a special fatigue toxin and antitoxin is mentioned in this connection as requiring confirmation. Little is known as to the production of fatigue substances in the central nervous system. The action of these substances, however, is not confined to the tissues in which they arise; excessive activity of one tissue can cause fatigue of others, and there are probably few physiologic functions that are not affected unfavorably by the prolonged and excessive activity of the muscular and nervous systems. The facts of acid intoxication are noticed as analogous to fatigue phenomena, so far as the latter are due to toxic substances. In conclusion, LEE mentions as noteworthy the lack of serious endeavor, except by the nostrum vendors, to provide specific antidotes for fatigue, considering its importance in our daily life. Alcohol, which in small amount seems to have a favorable action, is followed by unfavorable after effects and can not be classed as a valuable antidote, and the same is true of other substances of similar physiologic properties. A true antidote must recognize the causes. Both scientific and unscientific experience have shown the real value of sugar as a partial restorer of working power, and alkali, such as sodium bicarbonate, may not be without some value. These, however, are only in part efficacious and only rest and sleep can be thoroughly relied on.—*Jour. A. M. A.,* May 19, 1906

SURGERY.

Conducted by

MAX BALLIN, M. D.

Post-operative Ileus.—Among the serious complications which may follow a surgical operation involving the opening of the abdominal cavity, there is none, except secondary hemorrhage, which more urgently demands an early diagnosis and prompt relief than intestinal obstruction. In isolated instances it has been observed after operations where the peritoneal cavity was unopened. Post-operative ileus is not a rare affection. FINNEY relates twenty-six cases of post-operative ileus in his hospital and private practice, twenty-two of which required secondary operation of one sort or another. The two great factors concerned in the etiology of post-operative ileus are of either mechanical or septic origin. There is still a third and much smaller class in the development of which neither of these two forces is directly concerned, namely, those rare and interesting cases of adynamic ileus having their origin in disturbed conditions of the innervation and circulation of the intestine. He would, therefore, divide post-operative ileus into three main classes: (a) mechanical, (b) septic, (c) adynamic. But a hard and fast distinction is difficult to maintain owing to the fact that they may all be present in the same individual. Adhesions are the chief factor to be reckoned with in an attempt to prevent the occurrence of post-operative ileus, and efforts directed toward this end are likely to be productive of the best results. That drainage exercises a marked influence in the production of adhesions cannot be denied.

Treatment.—Prompt operation is indicated in every case after palliative measures have been given a fair trial and have failed. The character of the operation depends upon the nature of the obstruction and the condition of the patient. The prognosis is unfavorably influenced by the presence of infection. In its absence, it is excellent.—(Finney, *Annals of Surgery*, June 1906.)

Instrumentary Technic and Results of Epidural Injections.—CATHELIN, in 1901, first made injections of certain solutions in the epidural space; that is, the space between the dura mater of the spine and the inner periosteum of the vertebral canal. This space is not patent anywhere in the spinal canal except in the lower part of the os sacrum, where it expands into the "ampulla" of the epidural space, as the dura mater terminates at the second sacral vertebra. This ampulla of the epidural space can be reached easily, with an aspirating needle, from the "hiatus sacralis." This opening of the end of the sacral canal is found in the following manner: The patient is placed in a lateral position, the thighs being flexed upon the abdomen; the spinal processes of the os sacrum are palpated with the left index finger and followed downward, until the finger reaches a small triangular groove, bordered laterally by two small bony prominences. This groove is the "hiatus sacralis" and is marked with the left index finger, so that the right hand can easily introduce an aspirating needle about three inches long. The needle is held firm at an angle of 45 degrees to the vertical line of the body, and after touching the anterior wall of the sacral canal, the handle of the needle is brought closer to the coccyx and then can easily be introduced into the epidural space. If cerebro-spinal fluid escapes, the needle has been introduced into the dural sac, and must be withdrawn until the cerebro-spinal liquor stops escaping. The position of the needle is also to be changed, if flow of blood indicates injury of a vein; otherwise a syringe can be attached and the solution be injected. These injections have been used for anesthetic purposes in operations on animals and for analgesia on men, in case of sciatic pain, etc. The most valuable results of these epidural injections have been obtained in the treatment of enuresis and irritable bladder. Of 30 cases of enuresis of HIRSCH'S, 80 per cent were permanently cured, 13 per cent bettered, 7 per cent not improved. The injections seem to have more than a suggestive influence in cases of enuresis, as a hyperemia of the vesical trigonum can be seen by cystoscope after the injection. Sometimes one epidural injection is sufficient to cure a stubborn case of enuresis, but it is better to give at least three such injections, at intervals of two to three days. The following solution is used for the injection in cases of enuresis: Chloride of sodium, 0.2 (gr. iii); cocaine hydrochlor, 0.01 (gr. 1/6); distilled and sterilized water, 100 (oz. iii ⅛). The solution is injected warm, in quantities of 10-20 g. (℥iiss to ℥v) in adults, and of 5-15 g. (℥i ¼-℥iii ¾) in children. Also other medicines have been introduced in the epidural space, for instance, iodoform emulsion in Potts Disease.—Maximilian Hirsch, Vienna *Centralblatt fuer Chirurgie*, 1906, No. 21.

GYNECOLOGY AND OBSTETRICS.

Conducted by

REUBEN PETERSON, M. D.

Cesarean Section in Placenta Praevia.—Briggs reports four cases of placenta prævia, in two of which he operated successfully by Cesarean section. In one case he also succeeded in saving the child. His ideas are summed up substantially as follows: 1. Every pregnant woman should be examined during the sixth month for this possibility and its degree. The examination should be bimanual, both by the vagina and rectum, and stethoscopically by the vagina and abdomen. 2. In case of central placenta prævia, elective Cesarean section of Sanger type should be done at the earliest period of viability of the fetus consistent with safety of the mother. 3. In case the fetus is dead and labor is not spontaneous, it should be induced after shutting of placental circulation. 4. In emergency cases, with the woman not exsanguinated and an experienced operator at hand, the Sanger operation should be preferred if the uterus is clean or only superficially infected. The Porro operation should be selected in case it is positively and deeply infected. (a) In cases of total placenta prævia with (1) undilated and undilatable cervix; (2) cancerous or fibroid cervix, pelvic tumors, pelvic contraction or other obstacle; (3 ruptured sac with escape of amniotic fluid and presenting, but undescended, head. (b) In cases of lateral placenta prævia with living child, uncontrollable bleeding, and either (1) undilatable cervix or other obstacle to the usual obstetric procedure; or (2) ruptured and emptied sac with presenting but undescended head. 5. In elective cases full and systematic preparation should be made and the operation performed with every precaution and appliance that is called for. 6. In imperative emergency cases the surgeon must operate with whatever means are at hand. 7. Hemorrhage may be prevented by giving a full hypodermic dose of ergot ten minutes before operation, by compressing the aorta as soon as the child is delivered, grasping the neck of the uterus low down with both hands and firmly compressing the uterine arteries and by faradic stimulation of the uterine muscle. 8. Shock may be obviated and relieved by prevention of hemorrhage, by rapid operation, by the use of physiologic salt solution by the rectum and otherwise, by hypodermic or intravenous use of adrenalin solution and by aortic compression. 9. In the after-treatment purgation should be avoided; colon injections of saline solution, from 8 to 16 ounces, may be given at from three to eight-hour intervals; enemata may be used. 10. Any evidence of uterine infection must be met by vigorous measures of local disinfection by means of antiseptic exosmosis and drainage.—*Jour. A. M. A.*, May 12, 1906.

A Case of Heteroplastic Ovarian Grafting, Followed by Pregnancy, and the Delivery of a Living Child.—Morris reports this case.. The patient was a married woman, twenty-one years old. Menstruation began when she was fifteen years old and stopped in four years. The last two years the patient had suffered from the common symptoms of the menopause. The writer made a diagnosis of cirrhotic ovaritis and decided to do ovarian grafting. Four months after the operation the patient menstruated. The period lasted for five days. It was five months before menstruation again took place, lasting but one day. In the following month it lasted four days, and after that it appeared at normal intervals. Four years after the grafting the patient was delivered of a child weighing seven and one-half pounds. The writer states that the present case of heteroplastic grafting renews the hope that certain women who have reached the menopause through disease, surgical operation, or possibly after the normal menopause, may be made fertile.—*Medical Record*, May 5, 1906.

Diagnostic Significance of Ureteric Meatoscopy in Renal Diseases.—Changes in the appearance of the ureteral orifices, in connection with different diseases of the kidneys and ureters, have been reported by various authorities, and Klotz gives the results of the investigation of a series of cases undertaken to determine the value of the method.

In eight of nine cases of nephrolithiasis there were changes in the meatus, varying from a slight elevation of the mucous membrane to marked eversion of the lower end of the ureter. In the group of pyogenic infection of the kidney, comprising 13 cases, there were changes in eight. In six cases of tuberculosis there were alterations from the normal in five. In the fourth group of these cases of unilateral hermaturia, urine was seen coming from the affected side. Two cases of cystic disease presented normal orifices. The method is thus proven to have a very decided value.—*Surg. Gyn. and Ob.*, May, 1906.

PATHOLOGY AND BACTERIOLOGY

Conducted by

A. P. OHLMACHER, M. D.

A Newly Identified Poisonous Action of Horse's Serum.—A phenomenon which has been observed by occasional workers in serum institutes is the subject of an elaborate experimental investigation of ROSENAU and ANDERSON. The subjects for these experiments were guinea pigs. It was found that an intraperitoneal or subcutaneous injection of horse's serum, either normal or antitoxic, even in minute amount, would so "sensitize" the guinea pig as to render it abnormally susceptible to a second intraperitoneal or subcutaneous dose given after an interval of ten or more days. This susceptibility manifested itself by symptoms of profound intoxication apparently exerted primarily on the respiratory system, and the treated animal either died suddenly, or after a few hours recovered from the affection, which consisted of respiratory embarrassment, paralysis, and convulsions. The heart continued to beat long after respiration ceased. Essentially the same results followed the use of ordinary antidiphtheric serum from various sources, the "refined and concentrated" serum of the Gibson process, and was not modified by serum which had been dried, nor by that which was fresh or old. It is clearly pointed out by ROSENAU and ANDERSON that a single injection of horse's serum (normal or antitoxic) is absolutely inoccuous. Moreover, if several injections be given during the ten or more days constituting what the authors call the "incubation period" subsequent doses fail to excite the poisonous effects. But once "sensitized" a guinea pig is susceptible to the second dose for a long period, the tests having been positive after 160 days. Very minute quantities of serum serve to arouse this susceptibility.

The bearings of this interesting and important research upon the question of serum sequels in man is at present problematical; though ROSENAU and ANDERSON believe that some relationship exists between the phenomena observed by them in guinea pigs and the occasional untoward serum reactions of human beings. While they strongly emphasize the statement, "*Diphtheria antitoxin plays no part in this poisonous action, and is in itself harmless,*" evidence is brought forth to show the possible identity of the "immediate" or "accelerated" reaction described by Von Pirquet and Schick in their study of the "serum disease," and the toxic phenomena elicited in guinea pigs. In any event it is clear that this possible relationship must be considered in explaining the happily very uncommon event of sudden death after serum injection in man. Along with *status lymphaticus,* and "individual susceptibility," this "sensitizing" action of blood serum as demonstrated by the American workers must be considered. Although their work is not completed, ROSENAU and ANDERSON have shown the great importance of so arranging the dosage of a curative serum as not to "sensitize" a human being. This means either that a large dose should be given at first, or that several of smaller amount should be repeated at intervals during the ten days constituting the "incubation period."—*Bulletin No. 29, Hygienic Laboratory U. S. Public Health and Marine Hospital Service,* Washington, April, 1906.

Investigations Upon the Aggressins of Streptoccus Pyogenes.—Among the several recent hypotheses aiming at an explanation of the modus operandi of streptococcus infection and streptococcus immunity, Bail's aggressive theory, which has been applied to other microorganisms, is now advanced and experimentally tested by WEIL.

Streptococcus aggressin is obtained by exciting a hemorrhagic-cellular pleural exudate in rabbits through the agency of intrathoracic injections of virulent streptococci. After depositing the cells and bacteria by the centrifuge, the clear reddish fluid is sterilized by treatment with toluol. Whether the substance in question is a secretory product of the streptococci, or supplied by the tissues of the rabbit cannot be settled now. But it must have the property of stimulating infection, and animals treated with it must, by formation of antiaggressin, be immunized. Experiments were made on guinea pigs to test these points. A highly virulent streptococcus was used in fixed minute doses intraperitoneally in control animals, and multiples of the minimal dose were administered to guinea pigs previously treated by injections of increasing quantities of aggressin, three injections of 0.5, 1, and 2 cc. in a period of 21 days being employed. Such aggressin-immune animals survived several hours beyond the time in which the minimal dose killed, and this despite the fact that many times the fatal dose was used in them.

To study the effect of the treatment peritoneal fluid was obtained and examined at intervals. A most significant phenomenon was the early and active phagocytosis in the aggressin-immune animals and the relative infrequence of this process in the control guinea pigs. Analyzing the various experiments WEIL concludes that aggressin immunity enables the animal to inhibit the rapid increase of virulent strepococci and to so weaken the organisms as to cause them easily to fall prey to leucocytes.—*Deutsche med. Wochenschrift,* Jahr. 32, Nr. 10, 1906.

PHARMACOLOGY AND THERAPEUTICS.

Conducted by

C. W. EDMUNDS, M. D.

Treatment of Hematuria of Renal Origin.—BULLOCK considers calcium chloride and suprarenal extracts as the two most valuable hemostatic drugs to be employed in profuse hemorrhage from the kidney. The former should be used in 30 grain doses every four hours. If after six doses there is no improvement, it should be replaced by suprarenal extract which he advises in 5 grain doses every four hours and later every six hours. If neither of these have any effect ergot may be tried as may also lead acetate or hamamelis.

Hematuria associated with acute nephritis requires no special treatment beyond that of the general kidney condition; counter irritation, diaphoretics and purgatives. A good diuretic is potassium citrate, a teaspoonful to a pint of water. Hematuria produced by other causes as calculus, new growth, tuberculosis, etc., have to be treated by attention to the underlying cause—*Practitioner,* Vol. LXXVI., p. 693, May, 1906.

Antiseptic Powder—DOYER, at the 15th International Congress of Medicine, reported the discoverey of a new antiseptic powder to replace salol and iodoform. This powder, a combination of formic aldehyde and casein, has been named Proteol. Unlike other similar compounds it is not subjected to heat in its manufacture so the formic aldehyde is not rendered inert. Tubes of nutrient buoillon inoculated with virulent bacteria and to which some proteol is added are sterile after about twelve hours.

It makes a good dressing for wounds and may be combined with soap to disinfect the site of operation, etc.—*Lancet,* Vol. 170, p. 1268.

Stovain Poisoning After Lumber Anaesthesia.—FRANTENROTH reports a very interesting case of stovain poisoning in a 30-year-old woman in whom spinal anaesthesia was produced during the course of labor, preliminary to the use of forceps. One grain of stovain was injected following the injection of adrenalin. Within ten minutes there were marked symptoms of collapse with dyspnea and cyanosis of the lips and mucous membranes. After the use of camphor the patient improved somewhat, but there was paralysis of both arms and legs, which did not disappear completely even by the following day.

A few days later the patient complained of a very severe headache with sharp pains radiating into the limbs. Still later the patient said her right leg felt ice cold.

Shortly afterward and fourteen days after the use of stovain marked symptoms appeared in the right leg which FRANTENROTH thinks were due to a local spinal meningitis and neuritis of the right posterior spinal roots. These symptoms did not disappear for about three months. FRANTENROTH explains the symptoms as being due to irritation produced by the stovain and which in some cases has been followed by gangrene.

One case he cites was where a solution of stovain was injected into the abdomen of a patient suffering from a septic process. Local irritation was induced and gangrene at the point of injection followed, due no doubt to the lessened local resistance of the tissues giving a favorable point for the growth of the streptococci. The case terminated fatally from suppurative meningitis.—*Deutsch. med. Wochensch.,* XXXII., No. 7, 1906.

Stovain as Local Anaesthetic.—For nose, throat and eye work, MCKENZIE thinks a 10% solution of stovain is as good an anaesthetic as cocaine and it has never given any toxic symptoms. He, too, has noticed an injurious local effect upon the tissues if it is left in contact too long, as sloughing has occurred several times. He says it should never be left in contact with the tissues longer than fifteen minutes.—*Brit. Med. Jour.,* No. 2367, p. 1099, 1906.

Poisoning Due to Picric Acid Dressings on Burns.—ELLIOT reports the case of a girl, aged 14, who was burned on both arms and at the hospital where she was treated picric acid dressings were used. One week later she suffered from nausea and vomiting and jaundice with a temperature of 102.4° and pulse 154. A rash resembling that of measles appeared on almost all parts of the body except the face, hands and front of the legs. The blood showed a lessened number of red cells with increased number of leucocytes, especially eosinophiles. The urine was a bright red with a greenish shimmer on the surface. The dressing were changed.

The rash had entirely faded eight days later. Two days afterward the patient complained of pain in the abdomen and she vomited. Three weeks later she was readmitted to the hospital with abdominal pain and vomiting of blood. Blood was present in the urine and stools. At the end of a month she was discharged although she had a marked albuminuria. It was impossible to identify the urinary pigment.—*Lancet,* Vol. 170, p. 1175, 1906.

NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

Researches on the Blood of Epileptics.—Even if it be with little positive results that the various researches upon the etiology of epilepsy have thus far been conducted, the patient care of the workers in the field stands an eloquent testimony to the scientific spirit. Various researches are being continually carried on and ONUF and LOGRASSO report the results of their work, observations having been made in a number of cases, at the Craig Colony for Epileptics.

Some of their conclusions are as follows:

The fluctuations in the leucocyte count cannot be explained purely by the daily influence of meals, work or sleep, but that some additional factors must be at work to produce them and, further, their observations show, First, that a leucytosis may already be present directly before a seizure, and if so, is then, of course, not a purely secondary phenomenon produced by the seizure. The second fact brought out is that a grand mal seizure need not necessarily be preceded or ushered in by a leucocytosis. They also say: "These observations certainly teach the important fact that there is no absolute parallelism between seizure and leucocytosis in so far as, even when a distinct leucocytosis is present, such may reach its height at different periods in different seizures; they also show that the leucocytosis is, in part, at least, independent of the seizure."—*Am. Jour. Med. Sc.*, Feb'y. '06.

Certain Headaches.—Ross treats of certain headaches which he terms "the lymphatic type of headache," and which are characterized by alimentary symptoms (anorexia, pain after food, heart burn, nausea, and constipation), respiratory (cough and shortness of breath; rarely expectoration), cardiac (palpitation and hemic murmur, full, soft pulse), genito-urinary (slight albuminuria, amenorrhoea, menorrhagia, or dysmenorrhea), and cutaneous (chillblains, urticaria and edema), and other symptoms pertaining to the central nervous system, viz., usually heavy sleep with a feeling of being less rested than before retiring, or in cases, a much disturbed sleep; irritability combined with languor; all degrees of mental depression.

The association of such headaches with troublesome urticaria he deems especially significant of a deficient coagulability of the blood and this condition he believes especially amenable to the saits of calcium. He has used both the lactate, which he prefers as more paltatable, and the chlorids, which sometimes nauseate.

The following he has found a good mixture: Calcium lactate gr. 15, Tr. capsici oz. ½ in chloroform water t. i. d. a. c. or he administers the lactate of calcium gr. 15, in ⅓ tumblerfull of water, before each meal.

This treatment he has found quite efficient in relieving this class of headaches.—*Canadian Practitioner*, May, 1906.

The Function of the Left Pre-Frontal Lobe.—PHELPS, who in 1904 had published a monograph suggesting a more limited seat of control for the mental faculties than is commonly accepted, has made further studies of cases of injury to the brain, with post-mortem findings.

His original propositions were:

"First, The more absolutely the lesion is limited to the left pre-frontal lobe, the more positive and distinctive are the symptoms of mental default.

Second. The integrity of the mental faculties remains unimpaired with right frontal lesion, even though it involves the destruction of the entire lobe, or even extends to the entire (right) hemisphere.

Third. The exceptional instances in which seemingly opposite conditions exist are always reconcilable, on more careful examination with the assertion of an exclusive control of the mental faculties residing in the pre-frontal region of the left side."

As a result of his further studies, he now concludes:

1. Mental decadence always attends lesion of both prefrontal regions alone. 2. Mental decadence always attends lesion of the left prefrontal region alone. 3. Mental decadence never attends lesion of the right prefrontal region alone. —*Amer. Jour. Med. Sci.*, March, 1906.

Operations for Relief of Pelvic Diseases of Insane Women.—BROWN carefully reviews the literature upon the subject and then gives his own conclusions from studies made upon cases at the Manhattan State Hospital West, as follows:

"We regard these patients as having a right to be relieved of their physical suffering, and when such a relief can be given through surgery, it is the desire (in this hospital) that such shall be afforded them. It is in this spirit that these operations have been done and it is in the same spirit that Manton and Picque have been operating for years previous. With the physical improvement resulting, some of the patients have gone on under the regular hospital treatment to a complete mental recovery."

"One such cure of the patient's mental disturbance is more than a balance against many failures. This is especially true, as, in no instance in the experience of Manton and Piqué or myself, has the mental state of the patient been injured by the operation done."—*Amer. Jour Med. Sci.*, February, 1906.

LARYNGOLOGY.

Conducted by

J. E. GLEASON.

Regional Anaesthetization of the Larynx.—FREY reports 25 cases of complete anaesthesia of the larynx produced by injection of 1 ccm. of a 1½% solution of cocain in salt solution with the addition of a small amount of adrenalin, directly over the superior laryngeal nerve. The technic is comparatively simple. The patient is seated, and by palpation the position of the great horn of the hyoid and the upper posterior angle of the thryoid cartilage is determined. The site of injection is midway between these points about three centimeters from the median line. With the larynx pushed slightly toward the side in which the injection is to be made, the needle is entered to an average depth of 1 cm. into the free room between the musculus thryeohyoideus and the membrana thyreohyoidea. It is then directed slightly backward, and the solution gradually injected as the needle is brought forward to the point of puncture. Complete anaesthesia results in from 5 to 15 minutes, and lasts on the average about 20 minutes. The advantages claimed for this method are the use of a minimal definite quantity of cocain and the ease of its application.—*Archiv. fur Laryngol*, Vol. XVIII., No. 2.

Bier's Hyperaemie as a Thereupeutic Agent in Diseases of the Upper Air Passages.—POLYAK reviews the literature of the treatment of inflammatory diseases of the head and face according to the method first advanced by Bier. (Hyperaemie als Heilsmittel, Leipsig, 1905.) The author has made use of this method in laryngology, the hyperaemia being obtained both passively by means of an elastic bandage applied around the neck, and by suction, produced by instruments designed especially for this purpose. A rubber bandage, 3 cm. in width for adults and 2 cm. for children, is applied below the larynx low down around the neck, and is capable of adjustment to the desired tightness. It should never be tight enough to produce marked congestion or headache. The time of application varies with the condition. In general, the average for nose and throat diseases is 8 to 12 hours a day, interrupted 2-3 times for an hour to an hour and a half. In larynx diseases, one hour two or three times daily, controlled especially in the beginning by inspection of the larynx, has produced the best results in the author's hands. In cases where it is well borne, however, the time can be gradually increased to from 8 to 10 hours daily. The suction hyperaemia is obtained by an apparatus especially designed to fit the nasopharynx, pharynx and tonsils. It consists of a hollow glass tube with a broad end, reservoir and suction bulb. Suction is to be applied very gently and not more often than twice daily, each period consisting of three five minute applications with corresponding intervals. The author's researches, based upon 28 cases of diseases of the nose and sinuses seem to favor the use of passive congestion in acute catarrhal and suppurative diseases, chronic suppurative processes with crust formation, torpid ulcerative conditions and tuberculosis. Acute catarrhal, suppurative and phlegmonous inflammations of the nasopharynx, throat and tonsils should have combined the passive and suction hyperaemia. The most striking result of this treatment is the relief of pain, and judging from his 8 cases of tuberculosis of the larynx thus treated, the author concluded that the dysphagia can be quickly and favorably relieved by this method. His results, the first published in laryngology, warrant him in continuing his researches. —Archiv. für Laryngol., Vol. 18, No. 2.

Hypertrophic Pharyngeal Tonsils in the Aged.—FRANK reports three cases of adenoids developing in patients of 60, 65 and 66 years of age, which caused symptoms as in children, namely, interference with nasal breathing, and diminished power of hearing. Removal of the tissue relieved the condition. In elderly people the growth of adenoids is a very rare occurrence, and the diagnosis should always be confirmed after removal by microscopical examination, as the majority of tumors in the nasopharynx at such an age are malignant. Microscopically the striking appearance of such tissue is the small number of follicles, their oval shape, and their apparent compression by the surrounding reticulum, which proves that the latter is the part especially involved in the hyperplasia.—Archiv. für Laryngol., 18-2.

Laryngoscopia Subglottica.—GERBER describes a laryngoscope consisting of a small oval glass attached at an angle of 135° to a long handle, which is bent 9 cm. from the attachment in order to fit into the larynx. It is to be used in connection with the ordinary laryngoscope to explore the laryngeal part of the epiglottis, ventricles, posterior wall of the larynx and the subglottic region.—Archiv. für Laryngol., 18-2.

GENITO-URINARY SURGERY.

Conducted by

W. A. SPITZLEY, M. D.

Ureteral Calculus.—In former years ureteral calculi, as compared with the frequency of renal calculi, were considered of rather rare occurrence; today the Roentgen rays have shown, in cases where the X-ray diagnosis has been confirmed either by operation or by recovery of the stone, the ratio of ureteral to renal calculi to be as 44 to 29.

Renal calculi in their descent to the bladder are prone to be arrested at three points in their course: (1) two inches from the pelvis of the kidney, as the ureter bends forward over the psoas muscle; (2) at the brim of the pelvis where it dips down across the bifurcation of the common iliac artery; (3) close to the vesical orifice of the ureter.

The important diagnostic point to determine is whether the stone has been arrested in its course from kidney to bladder, and if so, where. This is usually difficult from the symptoms alone. If the tenderness at the point of the impaction is not definite enough to be a guide, and if the Röntgen rays do not give positive information, then it is best first to explore the kidney through the loin and to pass a sound down the ureter to ascertain the presence or absence of the stone in this duct.

Calculi may in some cases remain in the ureters for a long period, sometimes even without producing pronounced symptoms: they may be passed on into the bladder either by ureteral peristalsis or by the *vis a tergo* of the kidney's secretion; CABOT thinks massage is of material aid to the descent. The author believes that the dangers which may ensue from neglect of ureteral calculus, however, are greater than those attending its removal; in other words, the most conservative treatment is surgical.

The route to be chosen for removal is important; when the calculus is known to be near the bladder, especially if the patient is a woman, the intravesical route (working through the dilated urethra) is to be preferred; in all other cases, the extra peritoneal route through lumbar incision is the one of choice.

The attempt should always be made gently, however, to push a ureteral calculus either upward into the pelvis of the kidney or downward into the bladder; this attempt must not be carried to the point of injuring the ureteral tissue. If dislodgment is impossible, then the ureter should be incised, the stone extracted and the wound closed, preferably by two rows of sutures, the submucous one being of fine catgut, the outer one silk, of the Lembert type.

Drainage down to the point of suture is of course necessary to take care of the probable leakage; danger of a permanent urinary fistula the author believes to be exaggerated.—Deaver, *Annals of Surgery,* May, 1906.)

The Transperitoneal Examination of the Ureter in Cases of Suspected Calculus and the Combined Intra- and Extra-Peritoneal Ureteo-Lithotomy.—The author believes that careful and thorough palpation of the ureters is a necessity whenever the abdomen is opened for lesions of other organs, especially in the less acute cases of appendicitis; and he reports two cases of supposed appendicitis sent to him for operation in which the real lesion was found to be ureteral stone.

Transperitoneal examination means nothing more than palpation of the ureter with the hand in the abdominal cavity; this renders finding of the calculus easy.

In the combined method of operation, the peritoneum, beginning at the abdominal incision, is stripped from the abdominal and pelvic walls down to the ureter, no separate lumbar or inguinal incision being made. The finger or hand in the pelvic cavity pushes the ureter up into the extraperitoneal space within easy reach of the other hand and thus renders opening of the ureter easy. The peritoneal cavity is closed tightly, but a gauze drain is placed at the point of opening of the ureter and passed out through the superficial tissue at the lower end of the abdominal wound.

The author did not suture the incised ureters in his two cases, but would do so in the future. He had no infection and no urinary fistula resulted.—(Gibbon, *Annals of Surgery,* May, 1906.)

Conservatism in the Treatment of Senile Hypertrophy of the Prostate.—JOHN VAN DER POEL believes that catheterism properly applied and at the right time renders unnecessary many operations. Modern technique and advance in the knowledge of prostatectomy now make operations justifiable, which would not have been so according to former statistics. Operation must be considered much earlier in poorer patients or where aseptic catheterism is practically impossible than in other cases. Prophylactic prostatectomy cannot be recommended. In acute retentions the catheter should be given a full trial before intervention. In certain cases catheterism will reestablish the urinary function for many years, no matter what may be the condition of the prostate. In chronic retentions, if the case is aseptic, catheterism is preferable. If the case is septic and has been so for some time, clean catheterism seems to be powerless to eradicate its effects and operation is indicated.—*Medical Record,* May 26, 1906.

ORTHOPEDIC SURGERY

Conducted by

WILLIAM E. BLODGETT, M. D.

Classification of Cases Heretofore Called Rheumatoid Arthritis.—NATHAN limits this article to consideration of rheumatoid arthritis in contradistinction to osteo-arthritis, i. e., to those diseases of the joints which primarily involve the synovial membrane and soft parts of the joints, in distinction from those joint diseases which primarily involve the adjacent bone. These cases of rheumatoid arthritis NATHAN divides into (1) metabolic joint diseases and (2) infectious polyarthritis. The metabolic joint diseases he subdivides into an arteriosclerotic form, which consists of a hardening of the soft structures of the joints, beginning with the peripheral joints and proceeding toward the center, and the auto-toxic form, which is quickly deforming. The metabolic joint diseases are usually chronic from the start, while the infectious joint diseases may be acute.—*Am. Jour. Med. Sciences,* Jan., 1906.

The Etiology, Pathology, and Classification of Certain Forms of Joint Disease, with a Scheme for the Classification of Joint Diseases Generally.—In this article, which is one of an unfinished series, NATHAN suggests a classification which can be tabulated as follows:

Synovial Forms.

Inflammatory or Infectious (group name): Tuberculous, syphilitic, gonorrhoeal, typhoid, etc. *Trophic* (group name): Senile, metabolic, toxaemic (as with phthisis).

Osseous Forms.

Inflammatory or Infectious (group name): Tuberculous, syphilitic, gonorrhoeal, typhoid, etc. Trophic (group name): Senile, metabolic, neurotic, toxaemic.—*Am. Jour. Med. Sciences,* Apr., 1906.

Observations on Broken Necks.—On the basis of three carefully studied cases, SAYRE is lead to believe that the best results are secured by immediate reduction of the fracture and immobilization in plaster-of-Paris helmet and corset applied, if possible, in suspension. If this is impossible, by pouring liquid plaster-of-Paris around the neck, head, and shoulders, while the patient is horizontal. In applying the bandages to the head, it is well to put a roller bandage in the patient's mouth to allow room for the patient to eat.

In case there exist paralysis which cannot be relieved by manipulation, the spine should be exposed by incision, and effort made to relieve pressure on the cord. The cord may be so lacerated that repair is impossible, but this cannot be learned positively until the cord has been exposed. In any event, the X-ray will be of great assistance. In taking lateral views of the lower part of the neck, it is sometimes necessary to hold down one shoulder by a bandage in order to put the plate low enough to show a fracture below the fifth cervical vertebrae.

Support should be continued for at least three months. Attempts to allow patients to leave bed with the neck unsupported earlier than this are liable to result in pressure paralysis.

If complete readjustment of fragments can be secured, a perfect recovery without deformity or restriction of movement is to be expected, unless the cord has been lacerated at time of accident.

If perfect adjustment cannot be secured, there is likely to be slight restriction of mobility and slight deviation from normal position.—*Am. Jour. Orthopedic Surg.,* Apr., 1906.

On the Value of the Objections Made to Forcible Straightening in the Treatment of Knock Knee.—CODIVILLA (Bologna) advocates slipping of the lower epiphysis of the femur in correction of knock knee. The common objection to this method of treatment is that growth is interfered with and shortening results. In 700 cases of accidental separation of human epiphyses reported by Poland, alteration in the development of the bone was found only 56 times. Alteration of growth of the femur from accidental separation of its lower epiphysis was particularly rare. Experiments on animals have given conflicting results. It is probable that whether the later growth is to be affected depends upon the manner in which the accidental separation of the epiphysis takes place, rather than upon the fact of separation. In 2,000 operative separations of the lower femoral epiphysis for knock knee, reported by the author, many of them examined ten years after treatment, not a single instance of interference with growth was found. The epiphyseal operation is to be preferred to supracondylar osteotomy, so the author believes, because there is less chance for displacement of fragments, because the nature of the correction is better adapted to the deformity, and because it involves really less risk of interference with growth than even osteotomy.—*Rev. d'Orthopedic,* Mar., 1906.